Memo from the Editor

If we have ever put out an issue of the American Milk Review that deserved the title "Progress" this is the one. Three new spectacular pieces of processing equipment are described in detail. An equally spectacular method of handling bulk milk out in Iowa and a remarkable demonstration of cooperation by labor, producers, and management round out the picture. The story of the Stark County Public Relations program is our favorite if we must choose a favorite. This article tells the story of a superb step forward in the field of human relationships, a field that the industry has neglected too long. Taken together, however, all of the articles add up to progress. It is most encouraging.

N.M.

American MILK REVIEW

HAROLD E. TABER, *President* — JOHN C. TABER, *Vice-President*
PAUL H. TABER, *Treasurer* — GORDON URNER, *Vice-President*
RAY H. TABER, *Secretary*
Address of the officers and publication is the same

NORMAN MYRICK ..... Editor
GEORGE Q. BURKETT ..... Advertising Manager
Domestic subscription ..... $5.00 per year
Foreign subscription ..... $6.00 per year

Mid-Western Representative
GUY W. WHITCOMB
520 N. Michigan Ave., Chicago 11, Ill.
Phone: Superior 7-1043

South Central Representative
FRED WRIGHT CO.
411 North 10th St., St. Louis 1, Mo.
Phone: Chestnut 1965

MEMBER
ABC

Contents for November, 1951 *Vol. XIII, No. 11*

General Interest

He's Not Heavy 6
By Norman Myrick
Not Very Long Ago 50
Washington Reporter 52
By Harold Christie
Matter of Fact 76

Management

Bulk Handling of Milk in Iowa 16
By Norman Myrick
Let's Talk Accounting 42
By M. J. Kluger

Plant

New Plant in Philadelphia 24
By Norman Myrick
Industry Problems 28
By R. F. Holland and J. C. White
Standardize and Clarify at Same Time 30
By Norman Myrick
New Machine Removes Entrapped Air 34
By Norman Myrick
Handling Milk the Modern Way 40
By Jack Meyer
New Antibiotic Control Program 48
By W. A. Krienke

Sales

Postal Cards Can Move Specials 44
By Charles E. Patrick

Associations

Collegiate Students Judging Contest 62
Milk Industry Foundation Convention 64

Where To Buy It

Using Our Separator 78
Wants and For Sales 82
Index to Advertisers 86

published monthly by the urner-barry company
92 warren street ● new york 7, n. y.

The more business a milk company has the better it is for the milkmen who work for that company.

STANLEY EBBLING,
Business Agent,
Local 113, American Federation of Labor

He's Not Heavy, He's My Brother

How Labor, Producers and Management Pooled Their Resources to Sell Milk

By NORMAN MYRICK

Exclusive feature AMR

The ill-starred price war that has wreaked a heavy toll in the New York market began when a major distributor concluded that the way to meet the competitive pressure that was building up against him was to cut the price. In Chicago the solution to rough tough competition has been the adoption of various practices which all add up to cutting the price. Milwaukee has suffered a nagging hurt for nearly two years because various dealers sought to hold their market by cutting the price. It is a siren's call, this invitation to cut the price. Whenever the competitive situation builds up a fever the most popular cure is to cut the price.

The futility of this kind of war has been demonstrated again and again. Markets have been thrown into a welter of despair. Businessmen in entire areas have been brought to the brink of disaster. Enormous sums of money and priceless treasures in goodwill and friendship have been destroyed. And the net result has been considerably less than zero. In spite of these tragic lessons, however, an amazing number of milk distributors place their faith in this archaic device. Price is of extreme importance, particularly in the milk business where large volumes and small margins are the rule. But price cutting, hidden rebates, unwarranted discounts, kick-backs and all the rest are extending the doctrine of competitive prices to an absurdity.

Out in Stark County, in the rich agricultural and industrial heart of Ohio, the fluid milk industry has grasped the realities of competition. In this market, which can only be described as one of the most progressive in the nation, competition is sharp and stimulating. Low prices and large volumes prevail. The achievement was accomplished not by one dealer or by a group of dealers but by the industry—dealers, employees, and producers—working together for a common goal. A group of men with apparently opposing interests, were sufficiently broad in their vision to see that over-riding their individual differences was the inescapable fact that their common destiny lay with a healthy market that could consume all of the milk they could produce, process, and deliver. As a result of this appreciation there is in Stark County, the unique phenomenon of producers, labor union officials, and dealers, working efficiently together to sell milk.

This Stark County proposition is no Pollyanna gesture, no high sounding lip service to a pious idea. This is a practical reality that is selling more milk in Stark County than was ever sold before. It is backed by hard cash put up by all three groups with no strings attached. When a labor union or a producer organization dips into its kitty for sums of money that run into the thousands of dollars you have ample evidence that they believe in what they profess.

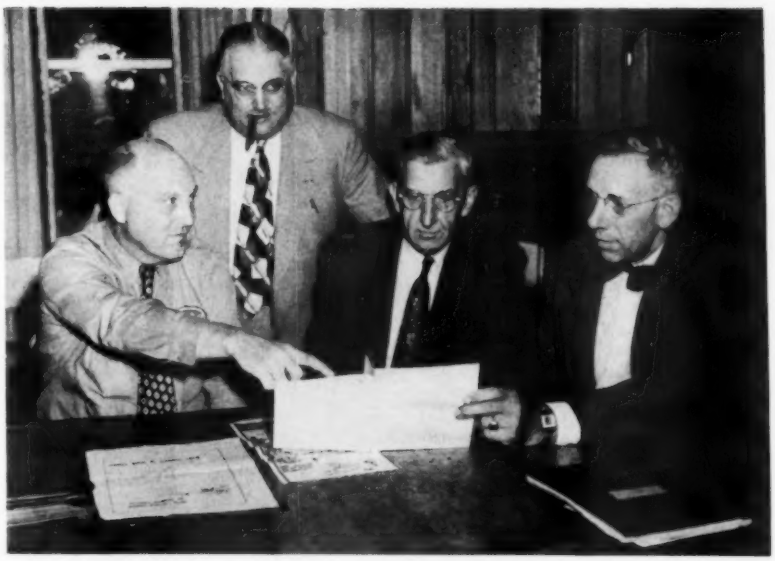
The program started about three years ago when the gallon jug idea from nearby Akron spilled over into Stark County. There are three large communities in the county, Canton,

Massillon, and Alliance. Fortunately for the industry, the disrupting effect of a sudden influx of jugs was avoided due to their inability to meet the standards established by the three cities. However, a number of jug stations sprang up around the fringes of the cities.

This was a crucial point. This was the point at which the time worn techniques of price cutting, kick-backs, pressure tactics and all the rest could have been invoked. Or it was the point at which some new fresh thinking could be applied to a particularly difficult competitive problem. The Stark County people put their money on the new approach. "Let's not allow the gallon jug get us on the defensive," they said. "Let's stay on the offensive."

The situation called for sound leadership. It was there. Few sections of our nation have developed so many individuals of recognized stature in the dairy industry as this small area in Ohio. There is Lee Cavitt, executive secretary of the Stark County Dairy Products Association. There is Mark Moomaw, general manager of the Stark County Milk Producers Association and an extremely active man in the American Dairy Association. R. H. McFaddin, Sanitary Milk Company in Canton is a past president of the Ohio Dairy Products Association. Another past president is R. A. Lamont, Supreme Dairy of Alliance. There is C. E. Schrock, formerly with the Sanitary Milk Company and now with Supreme Dairy, who is chairman of the Stark County Dairy Industry Public Relations Committee. There is Paul Quigley, who is secretary-treasurer of the Public Relations Committee, and Stanley Ebbling, progressive, able business agent for the Milk, Ice Cream, and Dairy Employees Union, Local 113, American Federation of Labor.

One hears this business of leadership kicked around at conventions and similar gatherings of the righteous until it becomes something of an inoccuous pudding bag. Indeed the caricature of a leader constantly drawn for us is such a cross between Tarzan of the Apes and the Rover Boys that one has difficulty in recognizing the real thing. In Stark County they had the real thing, a fact which goes a long way toward explaining why they have



Left to right, seated: Howard Mathias, member of the Stark County Dairy Industry Public Relations Committee, representing the Milk and Ice Cream Drivers Union, Local 113 (A. F. of L.); M. R. Moomaw, general manager Stark County Milk Producers Association, representing the farmers (producers); C. E. Schrock, Supreme Dairy Co., Alliance, Ohio, chairman of the Public Relations Committee, and a dealer representative; standing, Oscar E. Barkey, Sterling Dairy, Canton, Ohio; dealer committee representative.

The Stark County Public Relations Committee has three dealer representatives, three union representatives, three farmer representatives. Two other members of the committee are Paul E. Quigley, Stark County Milk Marketing Board; and E. L. Cavitt, Stark County Dairy Products Association.

one of the best programs for selling milk that you will find anywhere.

The program itself is a sales promotion, public relations, and industry relations all at the same time. The basic purpose is to sell milk but in the process of achieving this end surprising and unexpected dividends have materialized.

There are two broad principles underlying the Stark County program. The first principle is that the story which is being told is an industry story. It is the story of milk and of the men who produce, process and deliver milk. What the Stark County people wanted to do was to elevate the dairy industry to the point where it ranked as high as any other industry in the public thinking. They wanted the community to know what elements make up the dairy industry, how these elements operate together to produce, harvest, process and deliver a crop every twenty-four hours. They wanted to explain something of the economics of milk as well as the meticulous sanitary precautions that makes the milk industry a leader in food handling sanitation.

If the story to be told was an industry story then it followed that the entire industry must be involved in the telling. Furthermore, the program must be supported and carried out by all of the industry, producers, labor, and processors. On these two sound concepts, an industry story told by the entire industry, the Stark County program rests.

The program is financed by contributions from dealers and producers on a hundred weight basis. The union pays a specified sum into the fund each year. The first year the money raised amounted to $15,000. The second year the sum was doubled and a budget that amounted to $30,000 was provided. It is important to realize that this money was over and above the usual expenses of the various associations involved. This money was raised for purely promotional and public relations expenses and was turned over to a joint committee for administration. The wisdom of this joint contribution philosophy is strikingly apparent in the value that each group receives. The purpose of the fund is to sell milk. For the union people it means job security and additional jobs. For the producers it means a good market. For the processors it means more business. Because of the tripartite nature of the undertaking for every dollar that each group ap-

XUM

propriates they get three dollars in return. It is an unbeatable proposition.

The joint committee that administers the program is called the Public Relations Committee of the Stark County Dairy Industry. It is composed of elected representatives chosen by the groups involved. At the present time C. E. Schrock, Supreme Dairy in Alliance is Chairman of the committee and Paul Quigley, Sanitary Milk Company of Canton, is Secretary-Treasurer. The committee has the authority to spend the money as it sees fit without additional authorization from the groups contributing. The program, accepted by the three groups in its broad outline, is left up to the public relations committee to administer in detail.

Harold Jones and Jerry Beeman prepare a new poster for the buses in Stark County. Bus card program as well as radio programs have been favorites with the drivers.

The advertisement at right is typical of the smart approach the Stark County people have been using in their promotion campaign. Dealer ads appear in the newspaper every other day in Canton and every three days in the Massillon and alliance papers.

Picture
of a man
just before he said:
Make
mine
Milk!
Here are Thirst Quenchers
You'll Enjoy on a Hot Summer Day!
CLIP THIS AND SAVE IT
Red Cow!
Grape Lifter!
Apple Drink!
Coffee Walnut Shake!
Serve All Milk
Drinks C-o-l-d!
Crushed ice may be added. Chill the glasses. Substituting part cream for the milk will add extra body to the drink. Serve promptly after mixing for a refreshing, delicious drink you won't forget.
When the thermometer blows its top it's time for more and more Dairy Products on the table. Ask your milkman to serve you.
ICE CREAM HELPS
YOU FIGHT FATIGUE!
Stop at your nearest soda fountain for a dish of ice cream or a malted. And take ice cream home for the family—it's a low cost dessert for any meal!
MILK DEALERS
of STARK COUNTY

The actual promotional and public relations program itself was developed by the joint committee in consultation with the Harold R. Jones Company of Akron. The Jones organization is a firm specializing in sales promotion and public relations. It supplied the technical advice and professional touch as well as a sound grasp of the complete problem which has supplemented the vigorous enlightened approach of the industry.

Three mediums of communications are used, posters, radio, and newspaper space. In Canton every bus in the city carries a poster 27″x21″ urging people to use more milk. In Massillon and Alliance every bus carries an advertisement inside the bus.

Three types of radio programs are employed. Every morning there is a ten minute news broadcast over WHBC which is located in Canton. It is the first news broadcast in the area and a high spot of the public relations program. The drivers are particularly proud of this broadcast. It goes on the air while they are out on the route so that during some of their stops they actually hear it in the house where they are leaving milk. After the broadcast is over they are constantly hearing housewives say, "Oh I was just listening to *your* radio program." It has the tremendously valuable effect of making the route man proud of his part in the program as well as convincing him of its reality. It lifts him out of the category of ordinary milk peddler and elevates him into the position of a man who is buying time on the radio to promote his particular enterprise. Lucky Strike may have the "Hit Parade" and Schaefer Beer may broadcast the ball games but the Stark County routeman has the first news broadcast in that part of Ohio. He likes it.

Scattered through the day are 10 spot announcements broadcast by WCMW, another Canton radio station. The commercials on these two programs tackle the problem of selling from the taste angle first and the health angle second. There was a little more than four billion dollars worth of beer sold in the United States last year. It was sold on the basis of taste. "Clear," "sparkling," "tangy," "creamy," "mellow," were some of the adjectives that the advertising boys used to boost sales. Nowhere was it hawked as a medicine. Taste was the thing. The Stark County program uses the same approach and it is a gilt edged deal. It illustrates again

BUFFALO DAIRY REPORTS

more than 50% savings in cleaning costs

with PYREX glass pipe

Dodds Alderney Dairy, Buffalo, N. Y., claims cleaning costs have been cut in half with PYREX brand "Double-Tough" Glass Pipe. How? That's easy. PYREX pipe can be cleaned *in place*. You no longer have to take each section down and scrub it by hand. Instead, you simply circulate a cleaning solution through the entire installation—flush it with hot water, or chlorine—and you're ready for the next batch of milk.

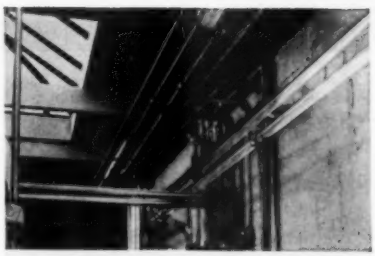
And the more PYREX pipe you use, the more economical it becomes. As Mr. L. J. Beck, Superintendent of the Dodds Alderney Dairy says: "It costs no more to clean an entire glass pipe installation, regardless of length, than it costs to clean only 2 or 3 sections of ordinary piping."

PYREX pipe shows exceptional resistance to corrosion. It also withstands sudden temperature changes. You can run 38° milk immediately after sterilizing with 190° water in perfect safety. In fact, the only effect it has is to provide improved sterilization. Users report bacterial counts consistently run lower with PYREX pipe.

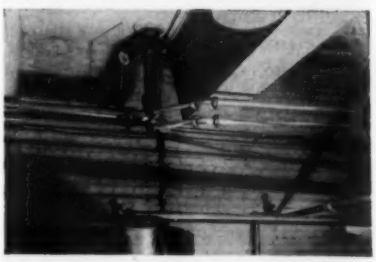
There's another important advantage, too . . . VISIBILITY. You can actually see the milk flowing through the transparent glass lines.

It's easy to check for cleanliness as well as troubles in the flow. Your visitors will be impressed with the way glass pipe dresses up your plant. One user says the handsome appearance of PYREX pipe helped him sell a big milk contract. For important savings, better sanitation, extra utility and improved appearance, specify PYREX pipe.

Creamery Package Mfg. Company is the national distributor for PYREX brand "Double-Tough" Glass Pipe. Contact your nearest CP representative for complete information.



Crystal-clear transparency permits you to keep an eye on the milk flow



Glistening glass pipe dresses up the appearance of your plant

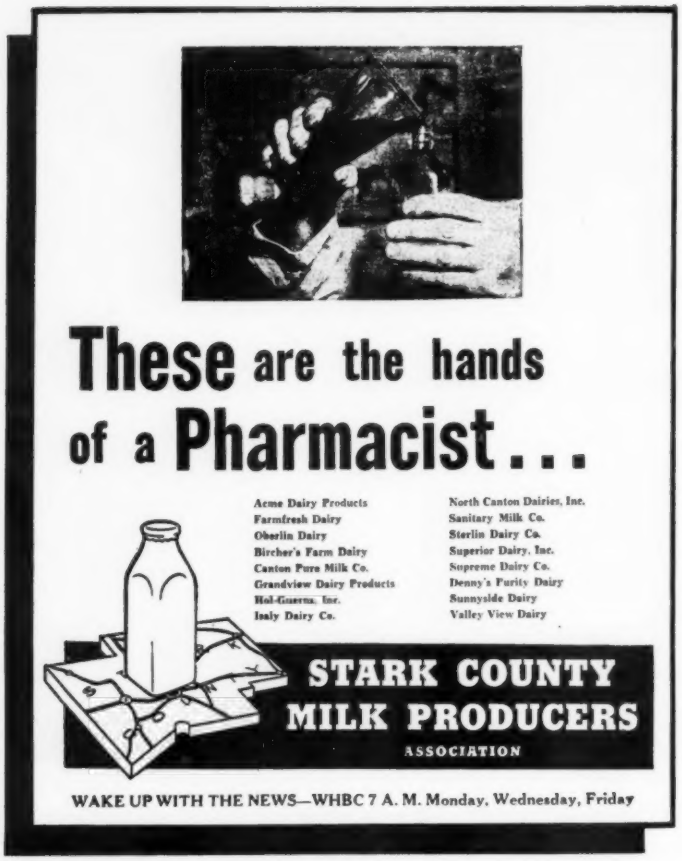
CP is a National Distributor for PYREX "Double-Tough" GLASS PIPE through its 21 Branch Sales Offices Coast-to-Coast

CORNING GLASS WORKS, CORNING, N. Y.

Corning means research in Glass

PYREX

1851 • 100 YEARS OF MAKING GLASS BETTER AND MORE USEFUL • 1951



This ad, one of a series built around hands, promulgates the idea that skill is required in the production and processing of good milk too. In reproducing the ad for this article the sales message was deleted in order to save some much needed space.

the keen understanding which these men have of the sales problem. Each individual milk handler is a competitor of other milk handlers, to be sure, but the real competition comes from the beer people who have a corner on four billion dollars worth of the beverage market. The real competition comes from the coffee people, the soft drink people, and the liquor people. Mark Moomaw and C. E. Schrock and Stan Ebbling and all the rest of Stark County boys appreciate that fact. They are selling milk because it taste good, because it is a cheap food, and finally because it is a health builder.

The third radio program is a 15 minute radio show on Sunday afternoon known as "Songs Of Our Times." This is an institutional show and does not attempt to do any direct selling. The commercials deal with facts about milk and the milk industry and dwell more than the other programs on the health aspect of milk. The commercials on all three programs pound away at the idea of "City Inspected Milk." This is a measure designed to meet the challenge of the jug as well as to emphasize the sanitary safeguards that are guaranteed in milk bearing the label "City Inspected."

Newspaper advertising has been utilized effectively. Advertisements occupying up to 60 inches of space have been employed. These ads appear on an average of about every other day in the Canton paper and one every three days in Massillon and Alliance. Whereas the radio programs are more or less the expression of the drivers, the newspaper space emphasize the contributions of the dealers and the producers. The ads are evenly divided between the two groups, about fifty per cent dealer ads and fifty per cent producer ads. All of the promotion, whether emphasizing the routeman's contribution or the producer's or the dealer's are designed to sell milk. The designation "dealer ad" or "producer ad" merely means that the particular part played by that section of the team that predominates in a particular ad is emphasized. For example, the producer ads discuss such things as land costs, herd costs, milk hauling and in general present an explanation of the practical role of the producer and the problems with which he has to contend in the milk industry. They are not designed to plead the cause of agriculture or to justify a price increase. They are used to foster a more complete understanding of the milk business on the part of the general public and to increase the prestige of the entire industry. The producer ads always close with the signature, "Stark County Milk Producers. Friendly Folks. Neighbors of Yours." It is smart stuff.

Some of the producer ads have been close to superb. One series, for in-

Al Disler, of Isaly's Canton branch, points to one of the "City Inspected Milk" decals used on dairy trucks as part of the Stark County Dairy Industry's public relation program.

RESEARCH

is one of the 10 basic tests of a good container

IN THE DURAGLAS CENTER, scientists and technicians believe the best containers can always be made better.

This program of ceaseless search for better, more efficient containers means you get the best bottles modern science, research and human determination can produce.

Get full details on how well it pays you to standardize on Duraglas dairy containers. Just call our nearest branch office for prompt complete service.

DURAGLAS DAIRY CONTAINERS PASS ALL 10 TESTS

1. *True economy*
2. *Positive protection of flavor*
3. *Accurate capacity*
4. *Lustrous transparency*
5. *Uniform quality*
6. *Improved by research*
7. *Durable Applied Color Lettering*
8. *Full, complete line*
9. *Visible inventory*
10. *Readily available*

FOR ALL YOUR DAIRY NEEDS—SPECIFY

Duraglas DAIRY CONTAINERS

"They pass all 10 tests"

OWENS-ILLINOIS GLASS COMPANY
Toledo 1, Ohio
Branches in Principal Cities

stance, was built around hands. With each new ad a picture of a different pair of hands was used. One time it was the hands of a pharmacist. Another time the hands of a surgeon were shown. Still another ad presented the hands of a machinist. In each case the copy led off in large bold faced type, "These are the hands of a machinist"—or a pharmacist—or a surgeon. The skill that these hands represented and the role that they play in society was quickly and simply expressed. The copy then goes on to say "May we suggest to you that great skill and care is required, too, in the proper production and processing of milk—especially milk which meets the "Blueprints for Health" laid down by your own City Health Department.

Select your Dairy carefully . . . for the Health of your Family cannot be measured by pennies. Remember, in Milk as in all other things, you get just what you pay for." A list of milk distributors in the area follows.

The dealer ads are equally as sharp. There is a sort of pixyish quality about them, a sly humor that arrests the attention and tickles the friendship glands. One ad shows a man mopping perspiration from his face, the complete symbol of hot weather. The caption says, "Picture of a man just before he said "Make Mine Milk." Another ad says, "How would you like to eat 36 times a day," and then goes on to explain the variety and quantity of food one would have to eat to equal the food value found in a quart of milk.

In addition to the promotional and public relations advertising the committee has developed a program of community relations. Each summer children from the three cities are taken to various dairy farms for a day in the country. Cattle shows are held in city parks so that folks can see the type of animal that is the source of their milk. So-called "human interest stories," stories that appeal because they touch on some common human experience, are furnished to newspapers. A display unit has been constructed that can be shipped to any one of the fairs that is held in Stark County. Special events are tapped for additional goodwill. When a heavy snow storm tied up the county last winter the Public Relations Committee was quick to furnish the newspapers and radio stations with information on the milk supplies available, information which the news gathering agencies eagerly used. When Massillon opened a new through-way, when Alliance celebrated its one hundredth birthday, the Public Relations Committee of the Stark County Dairy Industry were ready to help with the festivities and in helping earn more of that precious goodwill and esteem.

This Stark County program sounds like an ambitious undertaking as one examines its many facets. It is an ambitious program, a remarkable program, all the more remarkable when one considers the size of the industry that uses it. There are approximately 116,000 quarts of milk distributed daily in the area by contributors to the fund. The industry employs in the neighborhood of a thousand people. There are about twelve hundred farmers in the producers association. Thirty-five dealers, eight producers, tributors, and 12 distributor brokers handle the milk. This is not a large group or a particularly wealthy group. Yet they have seen fit to back their play with thirty thousand dollars in cash. They have identified the sale of milk as their common interest and bent every effort to encourage that sale as the best solution to their individual interests. They have entered into a co-operative effort with good faith and they are reaping the harvest that such an attitude can yield. They are members of a team. Each member has a special interest that has been adjusted so that it fits into the common interest of all. It is a magnificent lesson in enlightened progressive business enterprise. It is the practical application of the much abused terms of "co-operation" and "team work".

C. E. Schrock, Chairman of the Public Relations committee likes to tell the story of a boy carrying another boy who was accosted by a stranger. "Kind of a heavy load you're carrying, isn't it?" the stranger said. "He ain't heavy," the boy replied. "He's my brother." As a footnote it might be pointed out that figures on the milk business in Stark County show that there has been an increase in the sale of milk every single year since the program was started.

THE BUSINESS AGENT SAYS

The more business a milk company has the better it is for the milkmen who work for that company.

This is the chief reason the Milk & Ice Cream and Dairy Employees Union Local 113 in Canton, Ohio, find it worthwhile to take part in a public relations program along with the milk dealers and milk producers of Stark County.

Our public relations and advertising program makes the job of the milkman easier, more profitable and more secure. We, as a union, are entering our third year in public relation activity in cooperation with the producers and the dealers.

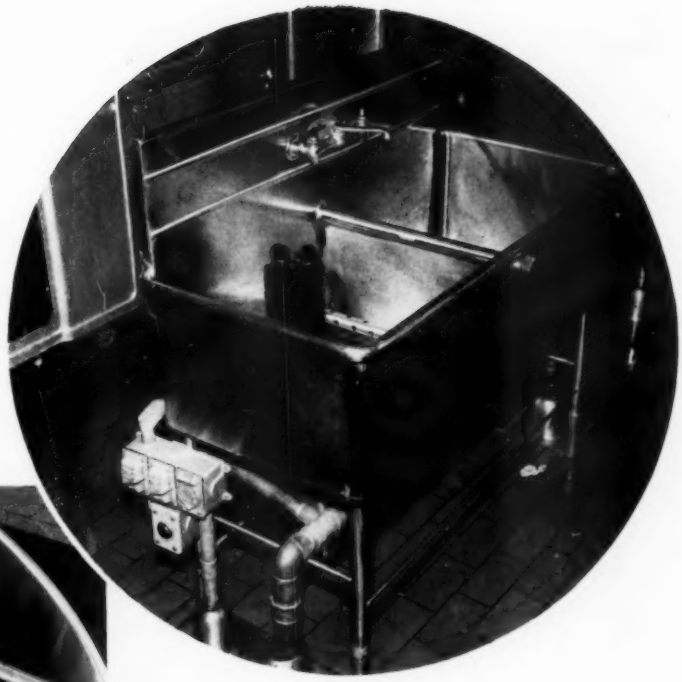
Through the advertising phase of the program the housewife is encouraged to buy more and more of our products and consequently it results in greater sales and a greater income for the drivers.

And so it is with the public relation division of the program. The better opinion the housewife has of the dairy industry the easier it is to approach her and to sell her extra milk and dairy products.

If the housewife is convinced that the milkman is an important part of the community, that he is friendly and courteous and that he wants to give her good satisfying service then the salesman's job is made that much easier. Public relations also points out to the housewife that the milkman is dependable, that he delivers milk to her on time all the time, and that he saves her untold number of steps in obtaining milk.

Any industry-wide public relations program should include the milkmen, who are an especially important part of the industry. The milkmen come in daily contact with the housewives, with the people who buy the milk, and above all others in the industry it is they who should be most conscious of the importance of public relations.

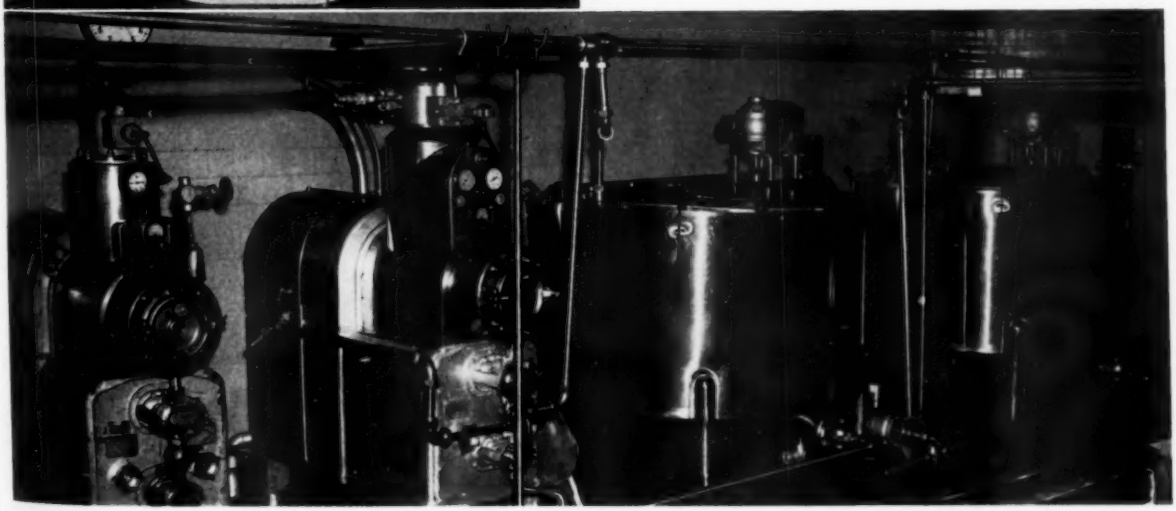
GIRTON EQUIPMENT HELPS LUICKS MAKE BETTER PRODUCTS!



"America's newest and most modern ice cream plant," the new Luick Ice Cream Company's plant at Milwaukee has been called. Luicks chose Girton Processors and Sanitary Cleaning Equipment to help maintain the high standards this company so zealously guards.

Do you have a processing or cleaning problem? Let Girton engineers help solve it.

GIRTON MANUFACTURING COMPANY
• MILLVILLE, PA.



BULK HANDLING IN IOWA

Swaner Farms Dairy Has Integrated Pen Stables, Milking Parlors and Tank Trucks Into An Impressive System

By NORMAN MYRICK

Exclusive feature

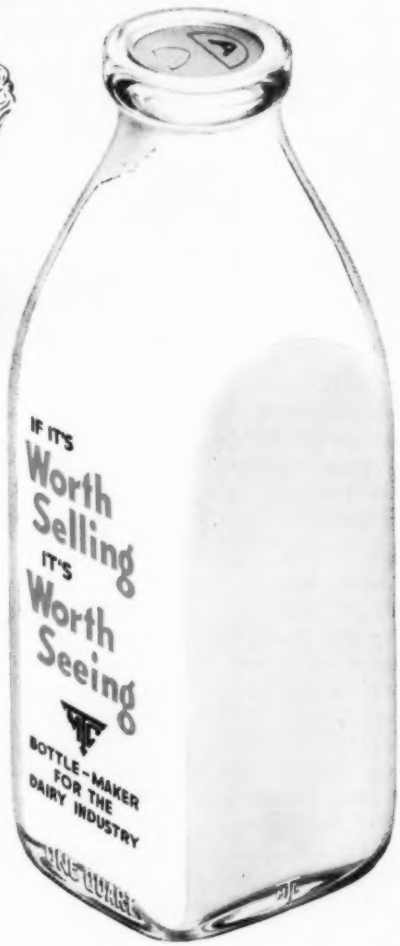
The big yellow tank truck rolled up the curved drive of the Young farm a few miles outside of Iowa City. Driver Marvin Saas swung in a wide arc near the milk house and threw the gears into reverse. He brought the truck to a stop a scant four feet from the milk house door.

Inside the milk house, hospital clean, a 300 gallon stainless steel holding tank gleamed in the light of high noon. Behind the tank a large picture window opened out onto the milking parlor that was an integral part of the milk house. Marvin climbed down from the cab and went into the milk house. He lifted the cover on the holding tank and glanced at a calibrated stainless steel rod that was attached to the tank's forward face. He checked his reading against a chart posted on the milk house wall. Two hundred and seventy-eight gallons. He examined the thermometer on the tank. Thirty-eight degrees. He started the agitator and while its lazily turning blades circulated the milk he went to a compartment on the rear of the truck and unlimbered a length of tygon hose and a section of extension cord. He plugged the business end of the extension cord into a wall plug in the milk house and coupled the tygon hose to the holding tank. He took a long handled sampling dipper and reached into the milk for six or seven dipperfuls of milk in order to get a composite sample. The samples went into a sample bottle which he returned to its iced tray in a sample compartment on the rear of his truck. He turned off the agitator and kicked in a switch that started a small centrifugal pump carried in the same compartment with the hose and extension cord. In a matter of minutes the holding tank was

The tank truck, the packaged milk house and milking parlor, the paved barnyard, and pen stabling are the main features of the milk production and handling program that Swaner Farms Dairy has instituted in the Iowa City milkshed. Picture at right shows a paving bee under way at a Menonite farm. Tanker hauls milk at lower rate in spite of distance traveled.

GLASS BOTTLES ARE BEST

. . . and here are some reasons why



Take it from Mrs. Housewife . . . glass milk bottles are still the most widely preferred of all dairy containers! And she backs up her preference with reasons that make sense: glass bottles never leak . . . enable her to see the contents . . . add no odd tastes to milk . . . are easier to handle . . . easier to pour from too.

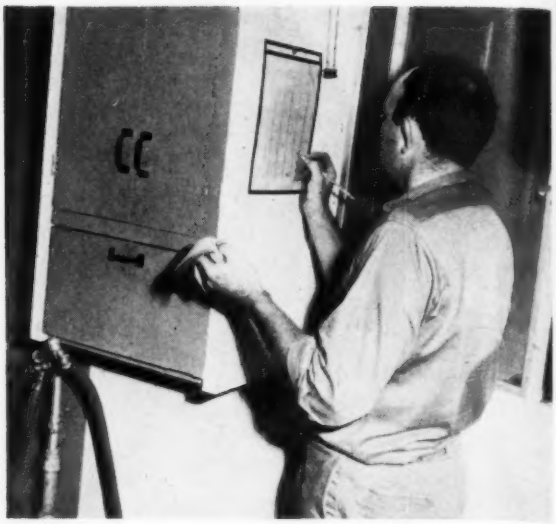
We'll bet most of your customers feel the same way. Why not give them milk in the very finest container . . . in Glass Milk Bottles by Thatcher.

THATCHER GLASS

MANUFACTURING COMPANY, INC.

Factories: Elmira, N.Y., Streator, Ill., Lawrenceburg, Ind.

Sales Offices: BOSTON NEW YORK BUFFALO PHILADELPHIA CHICAGO ROCHESTER, N.Y. CINCINNATI ST. LOUIS DETROIT ST. PAUL LOUISVILLE WASHINGTON, D.C.



Calibrated measuring rod, removable dairy thermometer, and conversion chart are shown in this series of pictures. Note the hook-like end of the measuring rod which enables the driver to handle the device with ease. The glass collecting jar that is fed by stainless steel pipe direct from the cow can be seen attached to the wall in lower picture.

empty. He uncoupled the tygon hose, rinsed out the holding tank with cold water, tucked the hose, extension cord, and pump back into the truck, and climbed into the cab. Fourteen minutes had elapsed since he spotted the truck.

Marvin Saas is a contract hauler from Swaner Farms Dairy in Iowa City. The Young farm was number thirteen on a fourteen farm route. The truck had been rolling since four o'clock in the morning. When he topped off his load at the last farm, Marvin had two thousand gallons of thirty-nine degree milk in the tank. He had travelled nearly one hundred and forty miles to get it. Even so he could haul it at ten cents a hundred less than he could using his other trucks and picking the milk up in cans. But the remarkable thing about the operation in which Marvin Saas participated, was not the distance travelled or the economy or the low temperature, the remarkable fact was that this milk represented two days' accumulation. The last time the truck had stopped at the farms was forty-eight hours before. Marvin was picking up milk *every other day*.

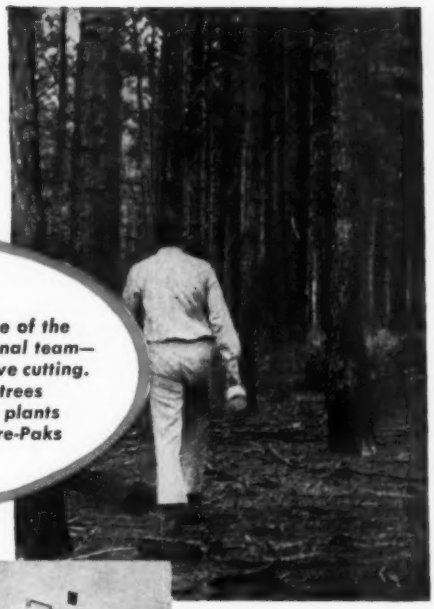
Bryant and Chapman in Hartford, Connecticut, Green Valley Farms in Haddonfield, New Jersey, Edisto Farms in Columbia, South Carolina, all have bulk handling routes. Each of these operations is a daily pickup affair. Although the people involved in them have been convinced of the practicality of every other day pickup, tradition and health regulations have prevented them from incorporating the idea into their system. Swaner Farm Dairy, with the blessing of the local Health Department and a progressive elan that stands in sharp contrast to less stimulating aspects of the milk industry, has turned the trick. Cooled from body temperature to below forty degrees in a matter of minutes, the milk is held in cold walled tanks in the milk houses for two days without any deterioration in quality or increase in bacteria count. Indeed, according to Jim Swaner, the younger half of the father and son team that operates Swaner Farms Dairy the counts on this milk picked up every other day, are as low and in some cases lower than the counts on milk picked up every day in cans. The route is new, scarcely three months old as this is written. Jim Swaner is confident that in a relatively short time the counts on the every other day bulk handled milk will be substantially and consistently lower than other milk.

Perhaps equally as remarkable as the every other day pickup feature of the Swaner system is the general philosophy of harvesting and handling milk upon which the every other day pickup is based. Farm management and plant management are not separate entities but are coordinated into a single activity. What is done on the farm has an important bearing on what is done at the plant. What the Swaners have done is to synthesize modern methods of milk production with modern methods of milk handling. The result may well be the pattern for the future.

Most of the farms on the tank route are pen stabling propositions. The

CONTROL MAKES THE DIFFERENCE!

INTERNATIONAL PURE-PAKS* are produced under the strictest control from the seedlings, through the woodlands, to the finished product... International Pure-Pak Milk Containers.



Trees are Chosen

This graduate forester—one of the hundreds of the International team—is marking trees for selective cutting. Only the finest pulpwood trees are sent to International's plants for the manufacture of Pure-Paks

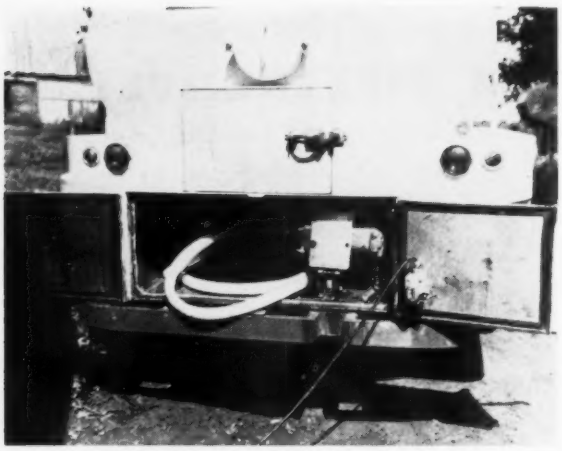
Hot off the Press

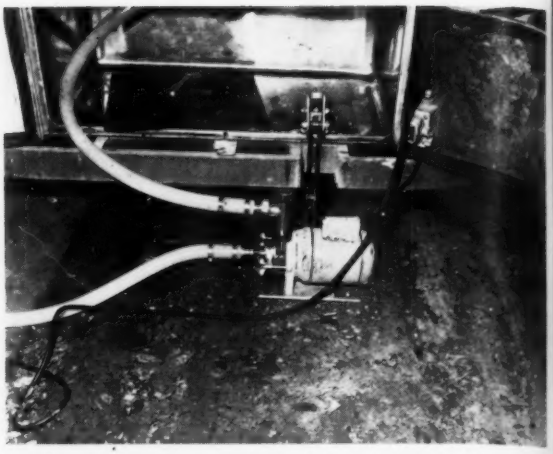
Here come the International Pure-Paks, printed with a colorful advertising message. All are as uniform as newly minted dimes...

Like so many others you can up your volume the proven way... switch to International Pure-Pak milk containers. Your customers will like this single service convenience

INTERNATIONAL PAPER COMPANY
SINGLE SERVICE DIVISION
NEW YORK 17, N. Y.

**Reg. by Excello Corp. of America*





Pumping equipment and compartment are shown in these two photographs. Picture at left shows pump and hose compartment. Picture at right shows hose connected to holding tank and pump lowered ready for business. Rails on which pump rides can be seen in the latter photograph. Upper hose goes to truck. Lower hose goes to holding tank in milk house.

stable is separated from the milking parlor by a paved barnyard. The barnyard is cleaned once each week. As a result of the pen stable and the paved barnyard, the animals are in a much cleaner condition when it is milking time than they are under the usual stanchion type arrangement.

Cattle go from the paved barnyard directly to the milking parlor. This milking parlor is an integral part of the milk house. The milk house must be considered as a package consisting of milking parlor, milking combine, milk room, and stainless steel cold walled holding tank, if the implications of the system are are to be grasped. The milk house is sold and built as a package. The farmer does not have a milk house and decide to put in a tank and then later add on a milking parlor, the unit is something he buys as a package. Of course there is no reason why a farmer already in the dairy business could not convert his present facilities into a similar layout. The packaged milk house, however, is the practical expression of modern sanitation, labor conservation, sound milking procedures, and quality milk production.

The milking parlors are an item of standard manufacture accommodating either four or eight cows. They are built of concrete with stall made of steel tubing. The stalls are on either side of a pit about four feet deep. The depth of the pit is such that when the cow comes into the stall her udder is at a height most convenient for the milker. In the pit, arranged for maximum accessibility, are all of the necessary utensils and materials for good milking. Hot water is available. Racks containing paper "cow towels" are strategically located. Teat cups are suspended from a hanger located at a point where the operator can reach them without taking unnecessary steps. Mechanism that operates the doors which allow the cows to move out of the stalls and back to the barnyard are located so that the milker simply reaches up and pulls a lever or a rope in order to release the animals and enable the next ones to enter.

The milk is drawn from the udder and then pumped, by the milking machine, through stainless steel pipe to a glass gathering jar attached to the milk room side of the partition that separates the milking parlor from the milk storage or milk room space. From the glass gathering jar the milk runs by gravity into the cold walled holding tank. In an eight stall parlor two men can milk better than fifty cows an hour. After the cattle have been milked the parlor is hosed down, manure and urine removed, and the parlor is as sweet and clean as the most finicky health department inspector could possibly desire. This is modern milking. The milker is working at a convenient level. The dust, flies, odors, and steps usually associated with milking are eliminated. All of the necessary equipment is within easy reach of the milker and consequently he is able to do a better job, and produce a higher quality milk.

The holding tank is a conventional farm tank that is becoming more familiar as the bulk handling type of operation grows in stature. The tanks used in the Swaner operation are manufactured by Mojonnier Brothers of Chicago. They are round bottomed, stainless steel jobs using cold wall refrigeration. A vertical agitator powered by an electric motor mounted on the top of the tank provides for automatic circulation of the milk. A standard dairy thermometer is mounted on the tank in such a manner that it may be removed for washing after the milk has been pumped out. Measurement of the milk is done by means of a stainless steel measuring rod calibrated for the particular tank to which it belongs. The tanks are anchored to the floor of the milk house.

The cooling ability of these cold walled tanks has been happily demonstrated on many occasions. On the Swaner route, regardless of the amount of milk in the tank, fifty gallons or three hundred, the temperatures did not vary more than eight degrees. Even this variation is extreme and occurred on a farm where milk fresh from the cow had just entered the tank. The usual reading after the milk has been in the tank for half an hour is around thirty-eight degrees F. This is excellent cooling anywhere but it is particularly noteworthy in Iowa where a recently adopted Grade A ordinance will tolerate sixty degree milk but recommends fifty to fifty-five degrees as desirable.

Measurement, butterfat samples and bacteria samples are all done and taken at the farm. Butterfat samples

Only she has a better way

to carry milk!

Illustrated: Case for square glass bottles, quart size.

• Next to Bossy's personal transportation, Cumberland Cases are the safest, most economical way you'll find to carry milk. *The name "Cumberland" on any milk bottle case is your assurance of a better value—greater satisfaction.*

CUMBERLAND CASE COMPANY

CHATTANOOGA, TENNESSEE

Samples are carried in sample tray above pumping equipment compartment. Driver takes butterfat samples.

When tank truck gets back to the plant driver couples hose to plant intake pipe and pumps out the load. Milk goes directly to clarifier to plate cooler to storage tank. Jim Swaner refers to the truck as "a receiving room on wheels".

are taken each time the milk is picked up and samples for bacteria counts are taken each week. The sampling and measuring are done by the driver. The measuring rod is calibrated in sixteenths of an inch. The height of the milk on the rod is checked against a conversion chart which is posted in each milk house. The rod and the chart are calibrated and compiled for a specific tank. The driver merely takes the rod reading and converts the inches of milk into pounds by referring to the chart. He then makes out two slips, one for the dairy and one for the farm. The butterfat samples are taken when the milk is thoroughly agitated. The sample bottles are carried in tray mounted in a compartment on the rear of the truck. The weighing and sampling procedure requires less time than it takes to write about it.

The pumping arrangements have been reduced to simplicity itself. The pump, a centrifugal affair of a quarter horse power, is carried in a compartment at the rear of the truck along with a ten or twelve foot length of tygon hose and about twenty feet of extension cord. A stainless steel plug is used to seal the hose between stops. Both the hose and the extension cord are carried loosely in the compartment. It is planned, however, to have both pieces of equipment mounted on reels in the near future, a move which should add substantially to the efficiency of the pumping operation.

When the driver arrives at the milk house he takes out the hose and cord and lowers the pump from the compartment to the ground. The pump is mounted on wheels that are engaged in an ingenious system of tracks. The driver merely pulls the pump toward him and it slides along the tracks until it reaches the limit of progress in that direction, then it swings downward, as though hinged, until it is close to the ground. The reason for putting the pump as low as possible is because it is a centrifugal pump. This type of pump does not lift effectively. It can push the milk from it itself into the tank perfectly well but it cannot lift milk from a lower point to itself satisfactorily. A positive displacement pump could do this but the simplicity of the centrifugal pump and the ease with which it is handled in this arrangement has, for the time at least, made it the choice for moving the milk from farm tank to tank truck. The milk enters the tank truck at the bottom of the tank which means that it has to work against a constantly increasing head pressure. This has not had any appreciable effect on the pumping except to slow it down a little as the head pressure increases. This time factor has not been of sufficient importance to make any difference in the pickup operation. The pump is driven by electricity drawn from the milk house through the extension cord. Pumping out time for a three hundred gallon tank is around five minutes.

When the truck returns to the plant the tygon hose is connected to a stainless steel pipe that leads to the clarifier. The milk is pumped directly from the truck to the clarifier. From the clarifier it goes over a plate cooler and then to the holding tank. Jim Swaner points out that the plate cooler is not necessary inasmuch as the milk reaches the plant at forty degrees or less. However, the plant is at present handling milk in cans as well as in bulk and the can system requires the plate cooler. Since the piping arrangements are already set up to take the milk over the plate cooler it is simpler to handle it that way than to route the milk around the cooler.

When the tank truck has been emptied of milk it is flushed out with water and then cleaned using a standard cleaning agent. Each morning before starting out on the route the driver sanitizes the tank by means of a chlorine spray fog. The fog is introduced into the tank through the hose connection at the rear. A chlorine

(Please turn to Page 85)

EVERY TIME YOU REFILL A *Liberty* RETURNABLE GLASS BOTTLE

YOUR BOTTLE COST MOVES CLOSER TO THE.....

LIBERTY.. *Your* BEST BOTTLE BUY!

VANISHING POINT

FLAME-POLISH WITH LUSTRO-COLOR

SPECIALIZING IN *Returnable* GLASS CONTAINERS SINCE 1918

LIBERTY QUALITY BOTTLES

Liberty's FLAME-POLISH Process insures original brilliance; increases toughness and adds trippage to Liberty's Returnable Glass Bottles. They have longer life in the field of duty — in and out of stores, restaurants and homes; on and off your trucks; in and out of washing, filling and capping machines. Their extra trippage and greater resistance result in fewer replacements, thus reducing your bottle cost to the vanishing point.

THE DISPLAY CONTAINER WITH BETTER RETURNS

Liberty Glass Company

SAPULPA, OKLAHOMA

SUPPLEE'S GREAT NEW PLANT

Can Process 200,000 Quarts a Day—Palletized Loading, Straight Line Operating Are Outstanding Features

By NORMAN MYRICK

Exclusive feature AMR

The difference between modern man and his predecessors is largely a matter of tools and knowledge. The mind of man has ever been able to dream great dreams, to envision mighty temples in the sky, but it has remained for our modern era to translate the dreams into reality. The men of antiquity dreamed of flying, of ships that would sail on land as well as on sea, of mastering the thunderbolt and building pathways to the stars. But it is modern man with the accumulated knowledge of the centuries at his disposal who has devised the tools and the materials that have enabled him to bridge the gap between the dream and the reality.

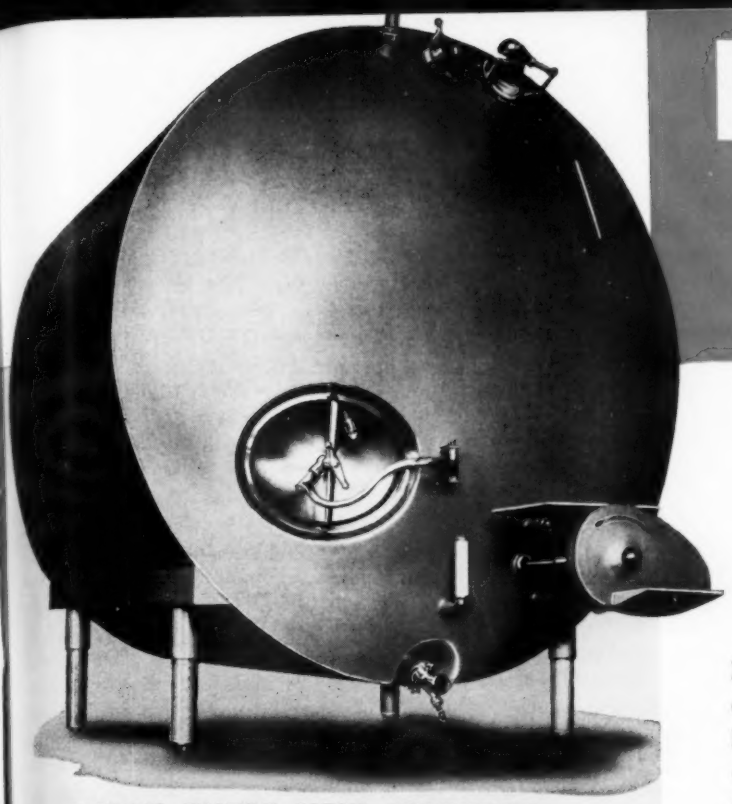
When one looks for the first time on the magnificent new plant of the Supplee-Wills-Jones Milk Company in Philadelphia one is torn between admiration for the dream and the splendor of its fulfillment. For here is the incarnation of the ancient vision of the pitcher that was always full, the well that never went dry, the cornucopia that spilled its bounty into the lap of the poorest peasant. Built at the cost of nearly $3,000,000, capable of turning out 200,000 quarts of milk a day at the rate of 576 a minute, the plant is said to be the most modern milk processing establishment in the world.

Pallet loaded ready to be placed in the delivery trucks are held in the huge cold room. Tags showing route number and route order can be seen suspended from ceiling. If you want to see a city at night hold picture upside down.

The task of turning the abstract into the concrete is never an easy one. An idea can be supplanted with another one easily enough. A line on a piece of paper can be erased and another one drawn. But once the shovels begin to dig, once the concrete goes into the forms, decision must long since have taken the place of possibility.

In the office of Fred S. Kirk, Vice-president in Charge of Engineering, there are two thick volumes of notes, minutes of meetings, suggestions, ideas, sketches. Drawers in the drafting room are filled with dozens of proposed floor plans, possible elevations, suggested equipment installations. Indeed one of the most fascinating chapters in the story the new plant is the distillation of ideas and thoughts and possibilities into the final working drawing.

The decision to build had been made as far back as 1940 but the war years, with their shortages of materials and their insatiable demand for labor, caused a postponement. After the war the project was revived and with its revival came a host of questions. Where, for example, should the plant be located? When one is working with a multi-million dollar proposition one does not say "Well, let's put her here," or "let's put her there" or "this looks about as good a spot as any. One has to *know* what is the best location. The Supplee people wanted to build where the future population of the city would be located. They wanted to be in an area where they would be close to their customers, where traffic conditions would be conducive to economical truck operation. They wanted to know in what direction the city was going to grow, where the future customers



Pfaudler STORAGE TANKS

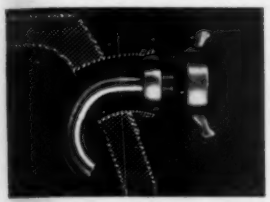
Newly Improved for added efficiency!

For years, many dairies have been able to reduce refrigeration costs with Pfaudler stainless steel storage tanks. Milk at 40°F., for example, can be held in a room at 70°F. for 24 hours in a Pfaudler 2000 gallon cork-insulated tank with only a rise of 2.4°F.

Now, Pfaudler tanks have been redesigned to make them better and more economical than ever. A new patented-design manhole means easier cleaning. The new door weighs only 14 lbs. and can be removed in less than 10 seconds. No tools are needed to lock it back in place. New fittings promote smoother product flow. A separate air vent fitting can be either capped or used for a telegauge connection.

Also, many other exclusive features to help you improve sanitation and speed up your operation have been added to Pfaudler insulated storage tanks. Learn all about them in our new catalog which just came off the press. Write today for your copy. Ask for Bulletin 884.

CHECK THESE NEW FEATURES!



INLET FITTING is specially designed to carry product smoothly into tank on short, circular path . . . direct it against tank head to minimize foam.

MANHOLE—a new patented design provides sloping collar to prevent water from accumulating. Door is dished to withstand constant loading and unloading pressures.

OUTLET VALVE is sanitary poppet type. It's lightweight and easy to remove for cleaning. It stays leak-proof, too, because of the small valve seat.

AGITATOR SHAFT has new nylon rotary seal bushing. It eliminates metal to metal contact and provides quiet operation coupled with long life. "Stream-flo" agitator provides straight currents, without churning.

Pfaudler

For full details, contact your nearest Pfaudler Dairy Distributor, or write direct to Pfaudler.

THE PFAUDLER CO., ROCHESTER 3, NEW YORK

STAINLESS STEEL PASTEURIZERS, PROCESS VATS, STORAGE AND WALL-COOLED TANKS AND FILLERS

would be. The city was divided up into nine areas and studies were made of each area. Over a given period all of the sections except one showed a population increase ranging from nothing to 3.6%. The one exception showed an increase of 22.7%. Another important indication was the number of building permits that were issued for each area. The character of the streets, the density of traffic, the type of industry in each section entered into the study. When the information had been gathered and evaluated it became possible for the Supplee Market Research Department to put its finger on a map and say "This is the spot." The location recommended proved to be a fortunate one. A new plant located in that area would enable four existing branch operations to be consolidated into one.

With the selection of a site came the massive question, "What sort of a plant shall we build?" It was with this question that the notes, the sketches, the conferences, the preliminary studies dealt. The final decision provided for a one level, "straight through" processing operation, 112,000 square feet of space, and a completely air-conditioned plant. The long careful study and the gradual evolution of these studies into a finished plan is clearly demonstrated by the series of drawings shown on the opposite page. The drawings deal with the arrangement of bottle fillers and cappers in relation to the bottle washers and the "straight through" processing operation.

This Was the Problem

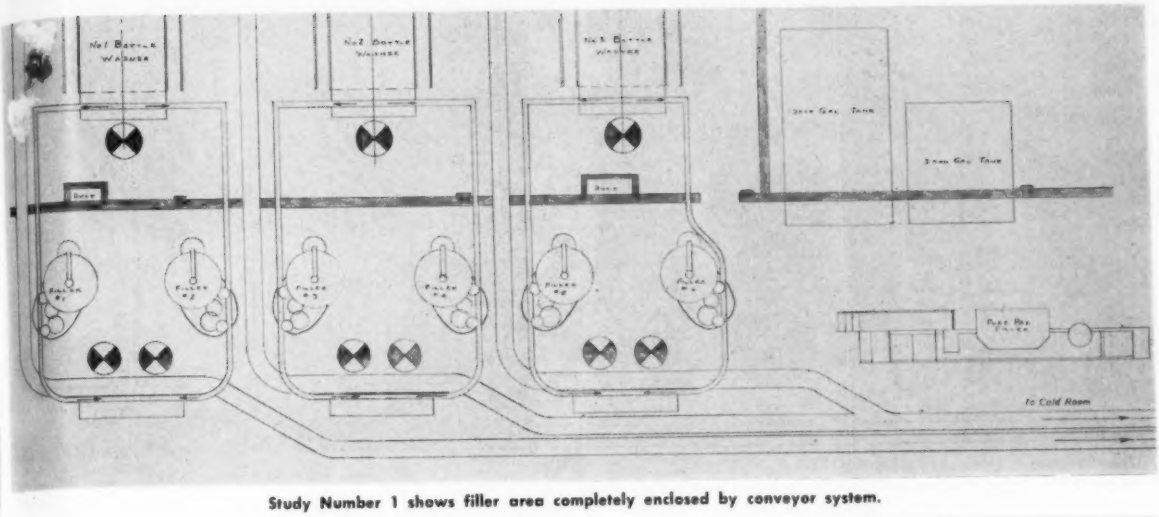
The problem was to provide processing, filling, washing, and conveying equipment to handle 200,000 quarts of milk a day. The solution was to use three processing units, each unit to be equipped with a clarifier, short time high temperature pasteurizer, and a homogenizer. Each set of processing equipment to feed into two high speed fillers. A sixteen bottle wide washer to supply bottles to each set of fillers and a case washer was assigned to each unit. The first drawing had each unit enclosed by the conveyor systems with the operaotrs close to the processing units. Two conveyor systems with the operators involved with two power units per conveyor. This layout was unsatisfactory because there was no access to the space inside of the section except by climbing over the conveyors. Some system of entry could have been provided but it was felt that such a solution would prove complicated and troublesome. The next step was to open up the area by having the bottle conveyors double back. This is shown in the second drawing. Although this layout eliminated the "fence" difficulty inherent in the first design, it required a third power unit per conveyor system and failed to provide easy access to the area between the bottle fillers and the bottle washers. The bottle conveyor presented a barrier. The final drawing shows the area opened up still more. Both bottle conveyors were arranged so that they came off from the same side of the bottle washer. This removed the principal barrier preventing access to the bottle washer. The number of power units required was brought back to two per system. A torque wheel was placed at the processing end of each bottle conveyor unit in order to ease the movement of the conveyor around the turn. Access to all parts of the area was provided for with the only impediment a low case conveyor that could be easily crossed. Furthermore no return line for the bottle conveyor was needed. This was a unique achievement made possible by the use of a drop forged, heat treated, chrome-manganese conveyor chain and pallet that will last a lifetime. The chain is made up of links that are larger than those ordinarily found on bottle conveyors and the pallets are also larger. This type of conveyor chain allowed the designers to specify a sharp horizontal turn so that the chain was carrying a pay load on its return trip. Only a short length of chain was necessary to make the connection from the unloading point to the bottle washer. This type of chain is called a flat chain. According to engineers at Supplee-Wills-Jones, it gives a smoother ride, and in general makes for a better operation.

The Tabor Avenue plant is a Paul Bunyan plant and milk is turned out on Paul Bunyan lines. Wooden pallets and fork lift trucks are the principal tools that enable the immense volume of milk to be handled efficiently and easily. Milk in cases goes from the filling area directly to a mammoth cold room. A main conveyor line runs the entire length of the inside wall in this room. From this conveyor line feeder lines lead to rows of pallets. Each route has two pallets, side by side, identified by a route number that hangs over them on a wire suspended from the ceiling. The day's order for each route is attached to this number. There are four principal types of milk handled by the company: homogenized A milk, regular homogenized milk, A milk, and regular milk. These types of milk go directly from the processing units, by conveyor, into the cold room. The conveyor takes them down the row of pallets and each order is filled from the conveyor. One type of milk comes over the conveyor at a time. For example, the day's requirements are known at the processing units. Perhaps the first run is homo A. The conveyor system will have only homo A on it until all of the orders for that product have been filled. The next run may be straight A milk. The conveyors take this product down each row of pallets until all orders have been filled. The run switches to the next product and the process is repeated until all of the orders for all four types have been filled. Meanwhile the special products such as chocolate milk, buttermilk, cottage cheese and the like have been coming out of the special products room and stored in a bank in the cold room. When the milk orders have been filled a load of each special product is taken by fork lift truck along the pallets and the requirements of each route are filled. There the milk and other product remains until loading time in the morning.

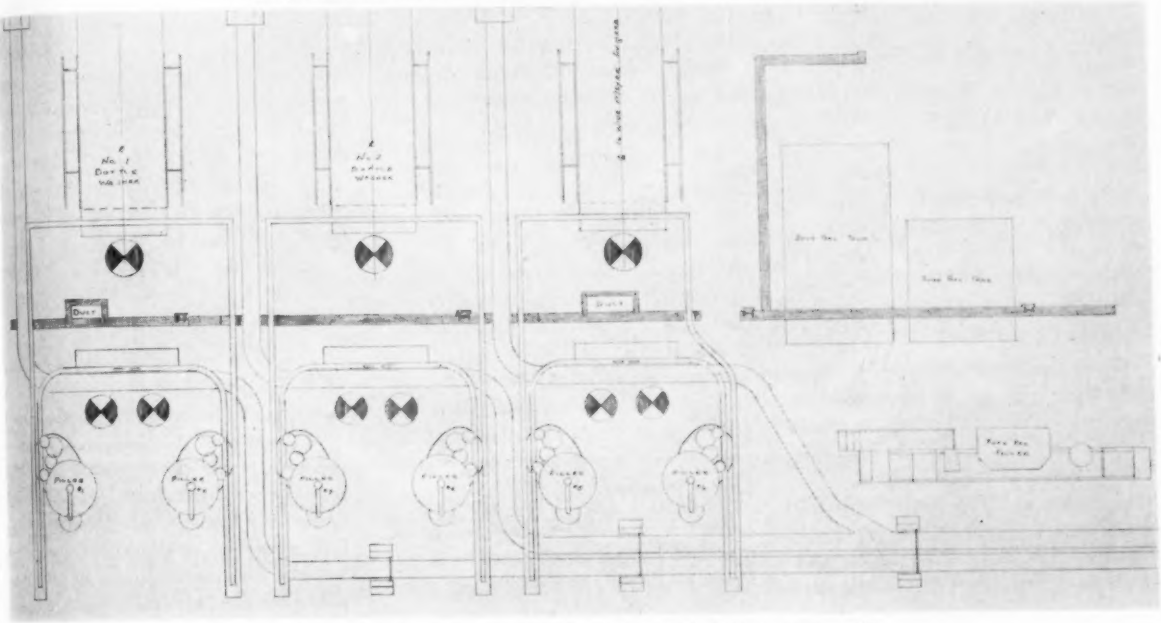
The cold room opens out onto the loading platform. Trucks back up to the platform according to a strict schedule. The fork lift trucks move up to a pallet, lift it off the floor, move out onto the loading platform and place the entire load, pallet and all, in the truck. In one operation 384 bottles of milk can be loaded into a truck. Total loading time is less than four minutes against 20 minutes under the old method.

Mohammed Comes to the Mountain

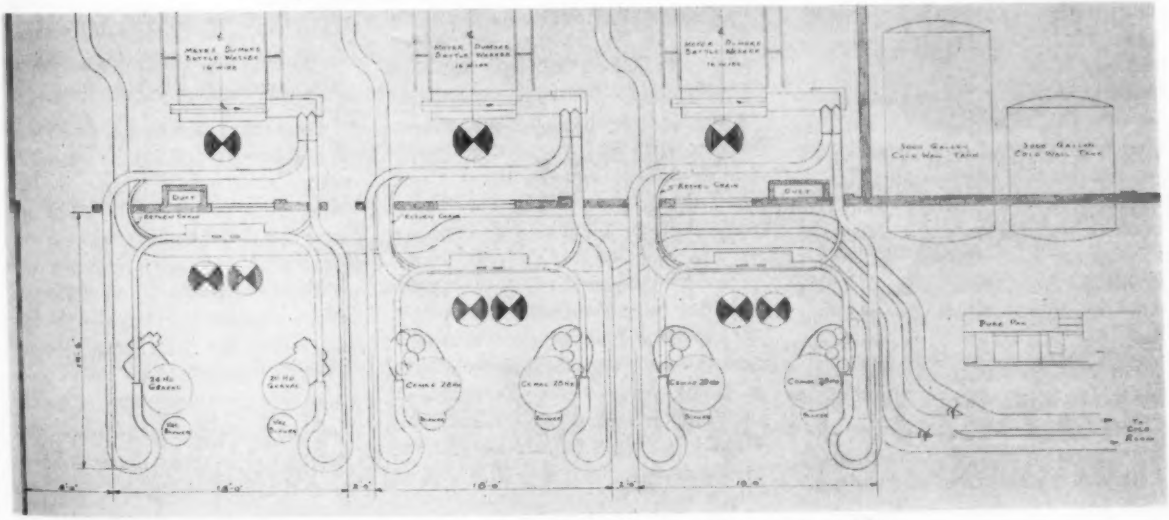
The loading platform itself is unique. All of the Supplee trucks do not have the same floor height. To



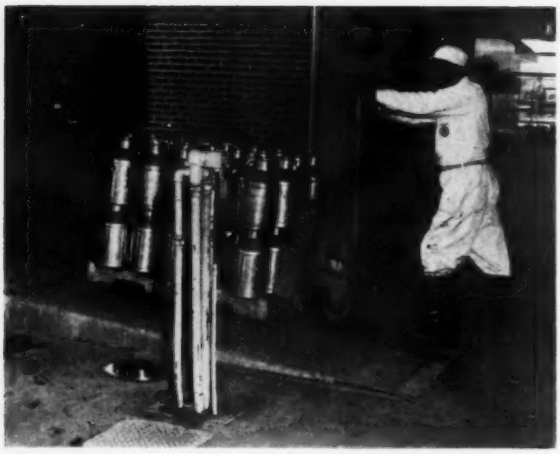
Study Number 1 shows filler area completely enclosed by conveyor system.



Study Number 2 moved conveyors back but required three power units.



Study Number 3 was one adopted. Note how conveyors merge at right.



The "Levadock" is an adjustable platform that can be raised or lowered according to the body height of the truck. Post at left is a hydraulic lift that operates the platform.

Use of fork lift trucks has speeded up loading and unloading tremendously. Picture shows operator stacking cases of empties. Trucks can be unloaded in 3 minutes.

meet this problem the loading platform is designed so that trucks can come in at different levels. For trucks that will not fit any of the levels provided, an arrangement caled a "levadock" is available. The levadock is simply a movable platform that can be raised or lowered by a hydraulic lift to the desired level. The fork lift truck can then load or unload with the same ease that it does when the platform and truck floor are flush.

When the trucks return from their route they back up to the unloading platform on another side of the plant and are unloaded in literally less time than it takes to tell about it. The truck backs up to the platform, the doors are opened, a fork lift truck inserts its forks under the pallet and scoots away with half of the empties. No sooner is the first fork lift truck out of the way when another one takes its place and repeats the operation. The driver closes the door, exchanges a few wise cracks with his friends on the platform, and drives away. The trucks can be and are completely unloaded and the driver on his way to the parking lot in slightly over two minutes. That two minutes begins when the truck comes up against the platform and ends when the driver pulls away. That is unloading time what is unloading time.

The fork lift trucks take the empties to the bottle washers where they are stacked. Bottles go on one conveyor, cases on another, to meet again in the filling area. The fork lift trucks scoot here and there, turning on a dime, hoisting prodigious loads, moving like so many gigantic doodle bugs across the immense expanse of the unloading room.

The "straight line" processing arrangement is exactly that. Milk from the holding tanks is carried in a main line that runs straight as a die past the special products room, past the glass bottle fillers, and comes to an end at the paper container machine. There is no deviation from that straight line of pipe. Branch feeders lead off from the main line short distances to particular locations but the concept of a straight main line is completely realized.

Milk is received by tank truck, by can, and by refrigerated railroad car. Each of these methods has an area designed especially for tankers or trucks or cars to unload. These unloading faciliteis are established on the side of the building directly opposite the loading out area. The tank truck section is first in line. Adjacent to this area is the can deck with its weigh tanks and its pier on which trucks unload. Beyond this is a railroad siding that enables cars to be spotted at the plant so that they can be unloaded by the fork lift trucks, or by pipe line. Each of these milk handling arrangements is connected by pipe line to a battery of storage tanks. Just inboard from the tanks is a laboratory where information on the temperature of the milk in the tanks is provided by a system of instrumentation.

The milk comes in at the various receiving stations, goes into the holding tanks, is checked by the lab, and then is sent on its way through the straight line to the processing locations. After processing the milk continues on its straight line journey to the cold room where the orders are made up and then on a further straight line to the loading dock on the side of the plant directly opposite the point where it came in.

The most stimulating characteristic of this superb plant is its constant reiteration of the fact that it is the product of careful thought and modern processing techniques. One has the feeling that this collection of tile and space and intricate machinery is the full expression of the knowledge that has been wrung from a secretive nature over the centuries. More knowledge will be discovered in the future but, for the moment at least, this plant stands as the most recent translation of dairy engineering thought into practical reality.

Simplicity, efficiency, economy are the fundamental ideas behind the plant. Nowhere does none find anything very complicated. To be sure some of the instrumentation systems are out of a layman's orbit and some of the fine details of the water and steam systems are strictly an engineer's dish. But these things are found in plants the nation over. Their operation is well understood. They are common tools in the industry. It is the manner in which these tools have been used, the delightful refinements

(Please turn to Page 72)

Save time in loading and unloading trucks with

ROLL-EASY
CASE DOLLIES
"The Finest"

They pay for themselves—
They cut handling costs—
They replace conveyors

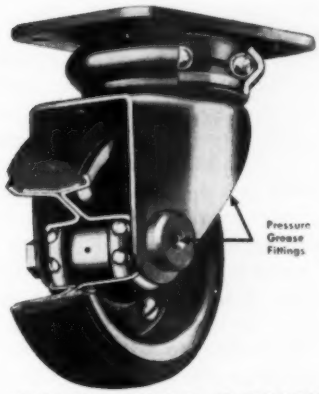
CADMIUM PLATED • LOW COST • LONG LASTING

MORE than 20,000 leading dairies have increased handling speed and reduced costs with Haynes Roll-Easy Case Dollies.

Roll-Easy Dollies are sturdily constructed, with heavy all-steel frames mounted on "Roll-Easy" Casters. The entire dolly, including casters, is fully cadmium plated. There is practically no wear-out to a Roll-Easy. Roll-Easy Casters are not just ordinary casters. They are casters that meet the exacting conditions of milk plant service — excess moisture — heat — cold — milk acid — caustics — under varying floor conditions and heavy loads.

5 STOCK SIZES • SPECIAL SIZES TO ORDER

Stocked and sold by all leading dairy supply houses



THE ONLY CASE DOLLIES
with the famous "ROLL-EASY" CASTERS.
BALL BEARING WHEEL AND SWIVEL PRESSURE LUBRICATED . . CADMIUM PLATED . . REPLACEABLE RUBBER TIRE

Note: Any minor changes in construction or finish from specifications are temporary and due to inability to secure standard materials.

THE HAYNES MANUFACTURING CO.
709 WOODLAND AVENUE • CLEVELAND, OHIO

INDUSTRY PROBLEMS

Dr. Robert F. Holland and Dr. James C. White, both of the Department of Dairy Industry at Cornell University, conduct their question and answer column each month in the "Review." Questions should be addressed to either Dr. White or Dr. Holland, Department of Dairy Industry, Stocking Hall, Cornell University, Ithaca, N. Y.

Figuring Piston Pump Capacity

QUESTION—Ever since our plant has been in operation we have used well water for our boilers and refrigeration equipment. We have experienced considerable trouble because this water is quite hard and a good deal of scale formation in our equipment results. A good sized stream flows about 50 yards from the plant and we are informed that this water is quite soft. We are, therefore, contemplating pumping it to the plant for boiler make-up water and for our refrigerating machinery. We have several piston pumps available to us at practically no cost, but do not know what size we need. Will you kindly tell us how this is calculated and, if possible, give us a formula for making that calculation.

E. D. P., Kentucky

ANSWER—The formula for calculating the size of the piston pump needed to deliver a certain volume of water per minute is not complicated and should be easy to apply from the data that you must have available to you. Symbolically it is as follows:

$$\text{G.p.m.} = \frac{A \times L \times N \times E}{231 \times 100}$$

The meaning of these symbols is:

G.P.M. = "Gallons per minute." This can be readily determined in the case of refrigeration equipment by measuring the condenser discharge, and in the case of the boiler by the insertion of a water meter in the feed lines.

A = The area of the piston in square inches. This can readily be obtained by measurement.

L = The length of stroke in inches, likewise obtained by measurement.

N = The number of discharge strokes per minute. This figure can be obtained by direct count if the motion of the pump is sufficiently slow or by placing a tachometer on the crank shaft. Please note that it is the number of discharge strokes. Some pumps discharge only on the forward strokes; others may discharge on both forward and backward strokes. These would, of course, be called double-acting pumps.

E = The volumetric efficiency in percentage. The volumeteric efficiency of a pump, of course, depends on various factors, but for cold water in a well designed machine it should be about 95 per cent. If the pump is not badly worn, this would be a safe figure to use. 231 is, of course, the number of cubic inches in one gallon.

I presume that you have had these water supplies tested by a competent water analyst so that you are certain that the stream water is of good boiler quality. If this is so, it should go far to solving your scale problem. If you have not had these tests made, I would certainly recommend that you do so and that you get in touch with your boiler inspector or boiler manufacturer for their suggestions.

It is possible that you may find that your refrigeration capacity is considerably reduced during the summertime by the use of water from the stream as opposed to water from your well, especially if the well water is at a temperature of 50° or 55°. Stream water often reaches a temperature of 70° or more. This high temperature will markedly reduce the capacity of the condenser of your refrigeration equipment. It might be well worth while to check this particular factor before proceeding.

Stable Milks For Display Purposes

QUESTION—At a recent fair we saw a large falls over which milk was running. It must have taken several tons of milk, and it is disgraceful that milk should be wasted in these times of critical food shortages.

A. H., New York

We wish to construct several displays using an artificial milk. Can you give us a formula for a product which will not sour?

F. F., Wisconsin

ANSWER—We are quite certain that the "milk" seen in display work was not real milk, for two reasons: (1) Real milk in such a display will sour very rapidly with a consequent loss in good show properties, and (2) real milk foams so strongly that it is difficult to keep an apparatus running, and effective foam breakers are not only expensive but usually unsatisfactory for use in milk. We have seen show apparatus constructed, using skimmed milk which contained formaldehyde. Unfortunately, in spraying or recirculating, a great deal of the formaldehyde odor is given off, and it ruins the effectiveness of the display. Most demonstrations which have operated in the past used a "synthetic" milk made from mixing lime and water. This will work wherever the material will be under

(Please turn to Page 85)

HOLLYWOOD STARS work for You FREE

when you advertise in the Movies!

Would you like to have Hollywood's most popular stars help *you* advertise? They do when you use "Screen Broadcast" Movie Advertising in your local theatres ... and the cost of this powerful advertising is surprisingly low.

Advertisers on Radio and Television pay fabulous sums to entertain and draw audiences. By contrast, local movie-goers — the residents of your trade area — pay admission to watch the screen on which your advertising message appears, dramatically demonstrated in a talking motion picture.

For further information on this result-getting advertising medium, clip and mail the coupon now.

The SCREEN BROADCAST Companies

UNITED FILM SERVICE, INC.
Kansas City — Chicago
Cleveland — San Francisco

MOTION PICTURE ADVERTISING SERVICE CO., INC.
New Orleans — New York

SCREEN BROADCASTS
2449 Charlotte, Kansas City 8, Missouri

I would like to know more about your Screen Broadcast Advertising Campaign.

FIRM _____

ADDRESS _____

CITY, STATE _____

BY _____

S. R. 63 TOUGH RAP FOR INDUSTRY

Concern Over Basic Philosophy, Inequities In Treatment Mark Reaction to OPS Supplementary Regulation

By NORMAN MYRICK

THE OFFICE of Price Stabilization has spoken. In the dehydrated prose of Supplementary Regulation 63 the substance of the speaking is set forth for all the world to see. As far as the fluid milk industry is concerned the speaker "should have stood in bed."

Supplementary Regulation 63, as its name implies, is a supplement to the General Ceiling Price Regulation of January 26, 1951. This general ceiling price regulation was a general price freeze promulgated in the dark days of MacArthur's retreat in Korea. It was a manifestation of the fact that the nation was at war. Its effect was to freeze prices at specified levels. The general regulation, however, contained provisions for altering the general price freeze pattern so that it would eliminate the inequities that such a general freeze would inevitably contain. The Office of Price Stabilization at the time spoke of future regulations that would be "tailored" to specific industries. The idea was to hold prices as of January 1951 and then adjust them in consultation with the industry involved, as the need was indicated. Supplementary Regulation 63 is such an instrument.

The Office of Price Stabilization is broken up into seven divisions. One of these divisions is the Food and Restaurant Division. This part of OPS is further divided into various branches of the food industry. One of these branches is the Dairy Branch headed by E. W. Tiedeman. The Dairy Branch is sub-divided into sections according to products. There is a Fluid Milk Section, and a Manufactured Dairy Products Section.

For seven and a half months the Fluid Milk Section, composed of experienced men from the fluid milk industry, was engaged in writing S. R. 63. This writing was done in consultation with a dairy industry advisory committee made up of prominent men in the fluid milk business. Once the regulation was written by the Fluid Milk Section it began its journey through the Dairy Branch, through the Food and Restaurant Division up to the very top, to the Office of the Director of Price Stabilization. During its journey it was scrutinized by officials at each level, altered, rewritten, endorsed and passed along to the next level in the stratified organization of OPS. The net result is a document that is a composite representation of the thinking in the Office of Price Stabilization. That does not

S. R. 63 In a Nutshell

1. S. R. 63 is applicable to all fluid milk, fluid milk drinks such as chocolate drinks, buttermilk, skimmilk, fluid cream, fluid cream products, and cottage cheese in its various forms.
2. Present price ceilings under which you are operating will remain the same unless changed on the basis of your petition or by OPS action.
3. S. R. 63, when applied to a local market, establishes new ceiling prices tailored to that specific market.
4. You are permanently removed from the General Ceiling Price Regulation when an area milk price regulation under S. R. 63 is issued for your market.
5. Local area price ceilings are calculated according to the following formula:
   A. Average of selling prices between Jan. 1 and June 30, 1950.
   B. Change in cost of raw materials from that period.
   C. Change in cost per unit of direct labor (including delivery labor and commissions) containers, cans, and cases from that period (other than for delivery).
   D. Under certain conditions a different pre-Korean base period may be used.
6. Once an area milk price is established you may increase your price because of increased cost of raw materials up to a certain prescribed legal limits but you must decrease your ceiling prices as cost of raw material decreases. This is called parity adjustment and continues to be automatic as under GCPR.
7. There is provision for automatic ceiling price increases other than for raw materials. Further increased labor and container costs will be recognized but only on the basis of subsequent petitions.
8. Petitions for adjustment in ceiling prices are to be made through the district offices of OPS, but the regulation may in some instances be issued by the regional or national office.
9. Area milk price regulations will be applied to a defined market-area. A marketing area will be considered to be the largest geographical area where similarity in cost, marketing and price pattern exist. For example, for purposes of OPS price regulation, two or more nearby metropolitan areas may be combined into one market area.

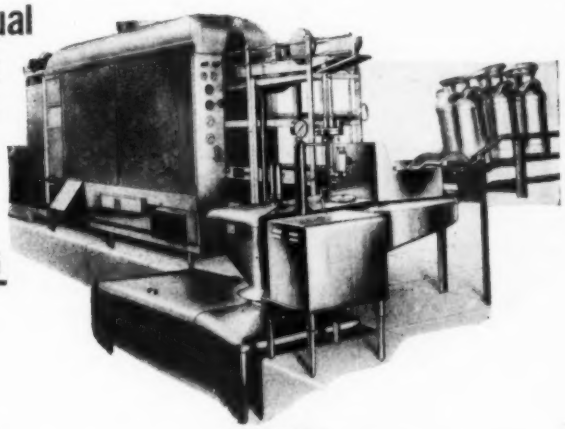
The L-P *Blendering* WEIGH CAN

AND THE

L-P VACUUM SAMPLER

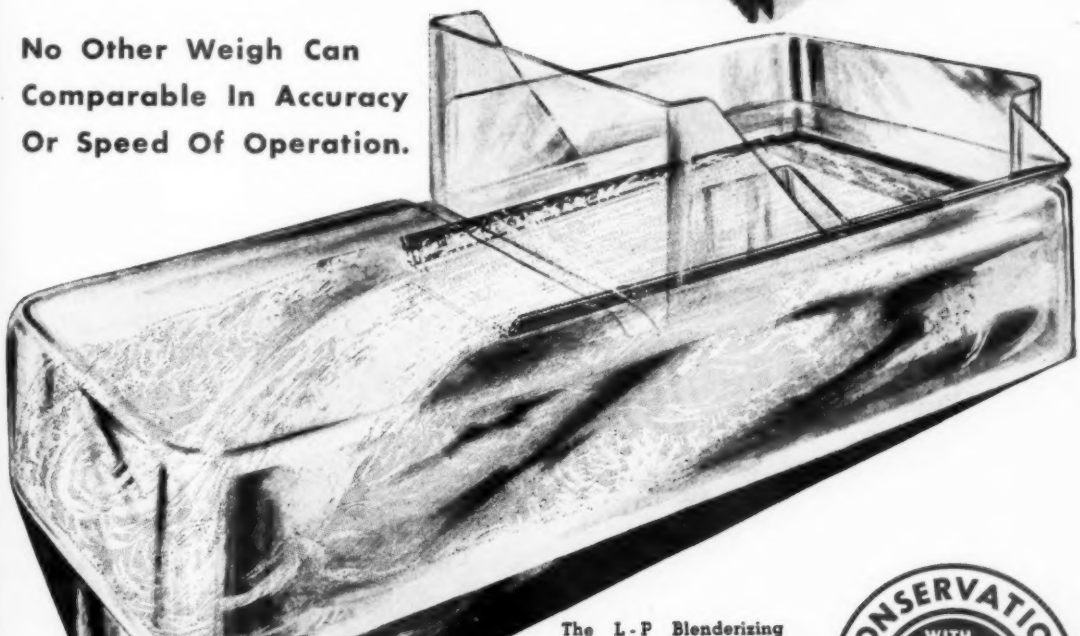
is a combination with no equal

for obtaining dependable samples at maximum speed for butterfat tests. Milk dumped into weigh can is instantly blended and sampled.



NO MECHANICAL OR HAND STIRRING
NO HAND SAMPLING
NO REWEIGHING

No Other Weigh Can Comparable In Accuracy Or Speed Of Operation.



The L-P Blenderizing Weigh Can automatically assures a more uniform blended product and more representative butterfat samples.
(Patent Pending)

CONSERVATION WITH L-P MEANS MORE FOR LESS

Manufacturers of
CAN WASHERS ● CAN AND CASE CONVEYORS ● VACUUM SAMPLERS ● RECEIVING TANKS AND BLENDERIZING WEIGH CANS
MIKRO-SAN ACID CLEANER

THE LATHROP-PAULSON CO.
2459 West 48th Street, CHICAGO 32, ILL.
152 West 42nd Street, NEW YORK 18, N. Y.

mean that it is a good regulation or a bad regulation. It merely means that if one wishes to understand the overall thinking of OPS one should read S. R. 63.

S. R. 63 provides for deviations from the general price freeze established by the General Ceiling Price Regulation. It declares that either on the initiative of the industry in a specific marketing area or on the initiative of local offices of the Office of Price Stabilization new ceiling prices may be established for local marketing areas. It should be noted that in the absence of any such action the price ceilings specified in GCPR will continue to prevail. If the industry in a certain area wishes to have the ceilings altered it does so by petition and the submission of data as provided under S. R. 63. Otherwise the prices in that area continue to be regulated by the original general price freeze.

Function of Local Offices

Under S. R. 63 the new ceilings are worked out by the local OPS organizations on the basis of data submitted by the industry in the area seeking the adjusted ceilings. The basis for the new ceilings is this: A base period called the pre-Korean period, which extends from January 1 to June 30, 1950, has been established. Prices charged by milk handlers during this period are their base prices. To arrive at their new ceilings, handlers may add to these base prices (1) Any increase in the cost of raw materials, in other words any increase in the producer price, (2) any increase in the cost of direct labor including commissions. This does not allow for office help, maintenance help, garage mechanics, etc. It relates only to labor directly involved in the processing and distribution of milk. (3) Increased costs of cans, cases, and containers. These three factors can be added to the base prices. The net result, in theory, is that the margin remains the same. Actually this is the point on which the most serious criticism from the industry is centered. The sum of the factors that S. R. 63 allows milk dealers to use in computing their new ceilings represents only about 85% of their total costs. The remaining 15%, made up of increased labor costs in other phases of their business, higher prices for equipment, higher taxes, and similar considerations, must be absorbed by the industry. "Cost absorption" is the label given to the idea which this unincluded 15% represents. The great criticism from the fluid milk industry is that operating margins are already so small that there is no room for such absorption. Although the margin is ostensibly frozen, actually it will constantly decrease as the unrecognized 15% increases.

The new price ceilings are to be processed by the local offices of OPS. The idea in theory is good, in practice it is not good. The men in the local offices are not experienced in the milk industry. In many cases they are political appointees. They are not set up to do the job. It is estimated that a minimum of thirty days would be required to handle the petitions for new ceilings with no guarantee that they would be issued at all. For example, in one particular marketing area, a petition for ceiling price adjustment was submitted. Included in the increased costs was an anticipated slight increase in labor costs. The anticipated increase did not materialize. Theoretically, therefore, that figure should have been eliminated from the calculations. As a practical matter the increase would have had so slight an effect on the price that it would have been eliminated in the process of rounding out the fractions. While the petition was in the local OPS office there was a change in personnel. It had been reviewed and more or less accepted. A new economist reviewed the petition and discovered the charge for labor that did not exist. He argued that since this charge was erroneous the accuracy of all of the other information was called into question. The petitions were returned and the tedious compilation of data had to be done all over again. The point is that while the labor charge in this instance was not correct it was of such little consequence that it made no difference. Experienced industry people in the Washington office would have recognized this and realized that as a practical matter the error would not alter the proposed ceiling price. In the local office, however, where such experience was not available, the error, a mole hill in itself, was elevated to the stature of a mountain. Delay, repetition, extra work, and irritation, all of it unnecessary, prevailed where speed, simplicity, and teamwork should have been the order of the day.

Issued Over Their Heads

From the milk handler's point of view the inequities of cost absorbtion foisted upon him and not foisted upon other industries whose products he must buy, is a threat to his ability to stay in business. The delay and amateurish handling of his petitions that he fears, not without reason, will result from action by inexperienced if not incompetent personnel in the local offices has added to his distrust of S. R. 63. But beyond these immediate considerations is a profound and disturbing fact which is the most serious of all the indictment of S. R. 63. In the opinion of the editor of this magazine S. R. 63 in its present form was issued over the heads and over the protests of the Fluid Milk Section of the Dairy Branch, over the protests of the Dairy Branch itself, and possibly even over the head of the Food and Restaurant Division. This opinion is based on investigations conducted by the editor.

It indicates that OPS, which should be an organization devoted to purely economic matters in the highly desirable business of controlling inflationary pressures, has departed from its primary function. The fact that an S. R. 63 original version, much more realistic in its approach to the problem of controlling milk prices, went through the OPS hierarchy up to and including the Food and Restaurant Division suggests that where men familiar with the industry are concerned and where the job of controlling prices on a fair and equitable basis is paramount one concept of price control prevails but that at higher levels where political and social considerations exert an influence another concept prevails. The conclusion is inescapable. The present emasculated version of the solution proposed by the Dairy Branch to the problem of price control in the fluid milk industry is the result of political expediency and the zeal of professional reformers.

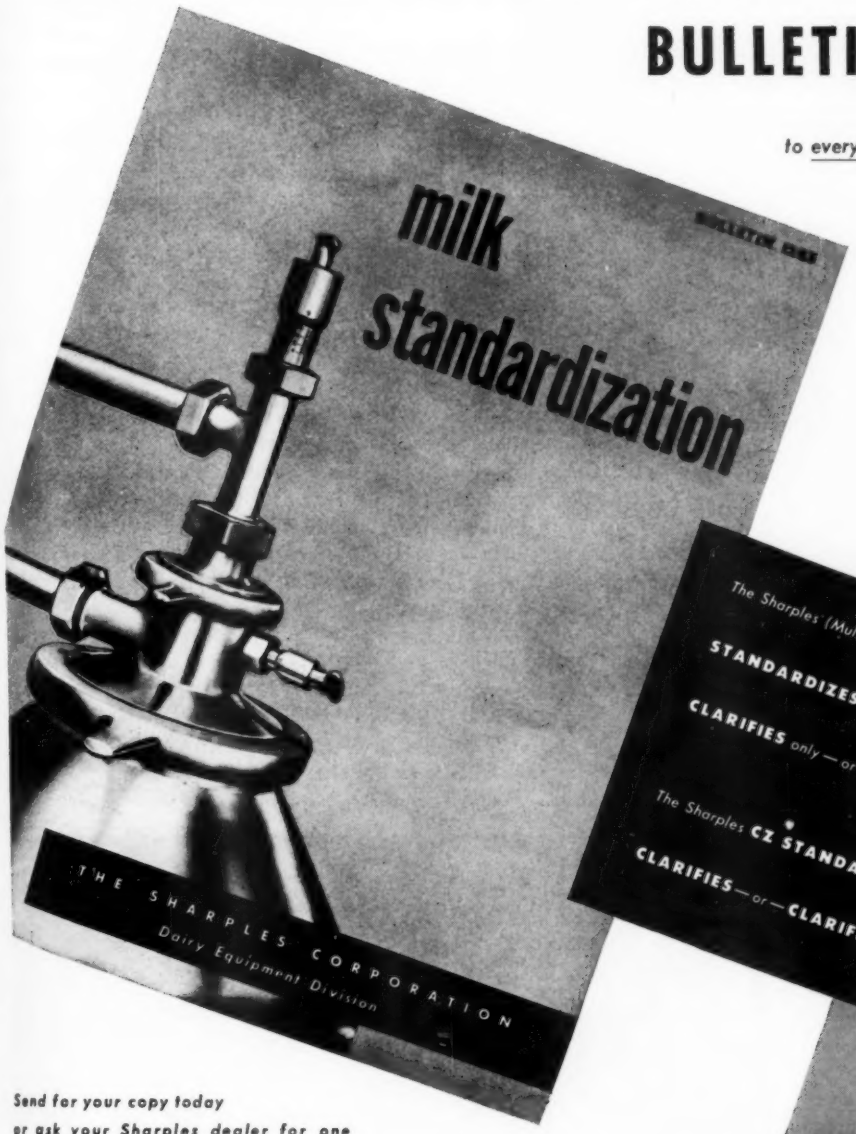
Furthermore, there are reasons for believing that S. R. 63 is in direct violation of Public Law 774 as amended by the Capehart and Her-

(Please turn to Page 66)

Get all the facts

BULLETIN #1265

Sharples has the answer to every milk standardization need.



The Sharples (Multi-Purpose) **MP**
STANDARDIZES while it **CLARIFIES**—or—
CLARIFIES only—or—**SEPARATES**
hot or cold milk

The Sharples **CZ STANDARDIZES** while it
CLARIFIES—or—**CLARIFIES** only

Send for your copy today
or ask your Sharples dealer for one

One Quality
THE BEST—BUY
SHARPLES

THE SHARPLES CORPORATION
DAIRY EQUIPMENT DIVISION
2300 Westmoreland Street, Philadelphia 40, Pa.

Vacuumizer May Be Answer To Entrapped Air Problem

Breuninger's Dairy in Philadelphia Has First Commercial Installation of New Device

By NORMAN MYRICK

THE PRESENCE of undesirable odors in milk has bothered milk processors since the days of the ancient Egyptians. The garlic or onion odor, the cowey odor, the silage odor are familiar problems. With the advent of the mechanical bottle filler entrapped air has been an additional difficulty. Together these two gremlins have generated more hot seats than one cares to remember.

At Breuninger's Dairy in Philadelphia there is the second of two known installations in the United States of a machine designed to whip these twin evils. The machine, called a vacuumizer, simply sucks out the entrapped air and the volatile odors from the milk as it passes through a vacuum chamber. It is a relatively simple machine yet, although the experience with it is limited, it has proved to be remarkably effective. One unit has been in operation down in Chester, Pennsylvania, at Miller - Flounders Dairy for nearly a year. This was a pilot unit installed more or less as a guinea pig. The unit at Breuninger's is the first bona-fide commercial installation in the country. It has been in operation for about three weeks as this is written.

The vacuumizer consists of a cylinder about 3½ feet high and perhaps 2½ feet in diameter. The device is incorporated into the regular processing line. At Breuninger's the vacuumizer is between the short time pasteurizer and the homogenizer. The milk flows through the regenerating section of the pasteurizer into the vacuumizer, on to the homogenizer and then back to the pasteurizer where the temperature is raised from 135 degrees F., which was the temperature at which it entered the vacuumizer, to pasteurization temperature.

The milk enters the vacuumizer at the bottom and is carried by a pipe to the top where it is discharged into a shallow pan with a perforated bottom. The product drops through the holes in the bottom of this receiving pan in a coarse spray. It falls about two feet to the bottom of the vacuumizer where it is piped to the homogenizer. The removal of volatile odors and entrapped air takes place during the fall of the milk from the receiving pan at the top of the vacuumizer to the bottom of the cylinder. The cylinder is subject to a 12 pound vacuum which literally sucks out the volatile odors and entrapped air. These are carried off through a small pipe to the side of the processing room and discharged into the air. The air discharged from the vacuumizer is heavy with volatile odors that have been removed from the milk. If one takes a whiff of the air discharged one can easily detect the odors. Discharging the odors in the processing room does not have any effect on the general processing room atmosphere. The constant circulation of air in the room and the large amount of air compared to the relatively small amount removed from the milk allows the discharge to be easily absorbed.

The short experience at Breuninger's and the longer experience at Chester show a definite practical value for the vacuumizer. Tests at Breuninger's with milk not vacuumized and milk that has been vacuumized demonstrated the superiority of the vacuumized product. Samples of each product were given to a test panel that was blindfolded. In every case the vacuumized and unvacuumized samples were identified correctly.

The removal of entrapped air appears to be fully as important from a processing point of view as the removal of volatile odors. Breuninger's reports marked improvement in the bottle filling operation after the milk has been run through the vacuumizer. This is particularly true with homogenized milk. Entrapped air going through the homogenizer was broken up into extremely small units. When the milk reached the filler there was trouble getting a full bottle as well as considerable difficulty with foaming. The vacuumizer appears to rem-

(Please turn to Page 84)

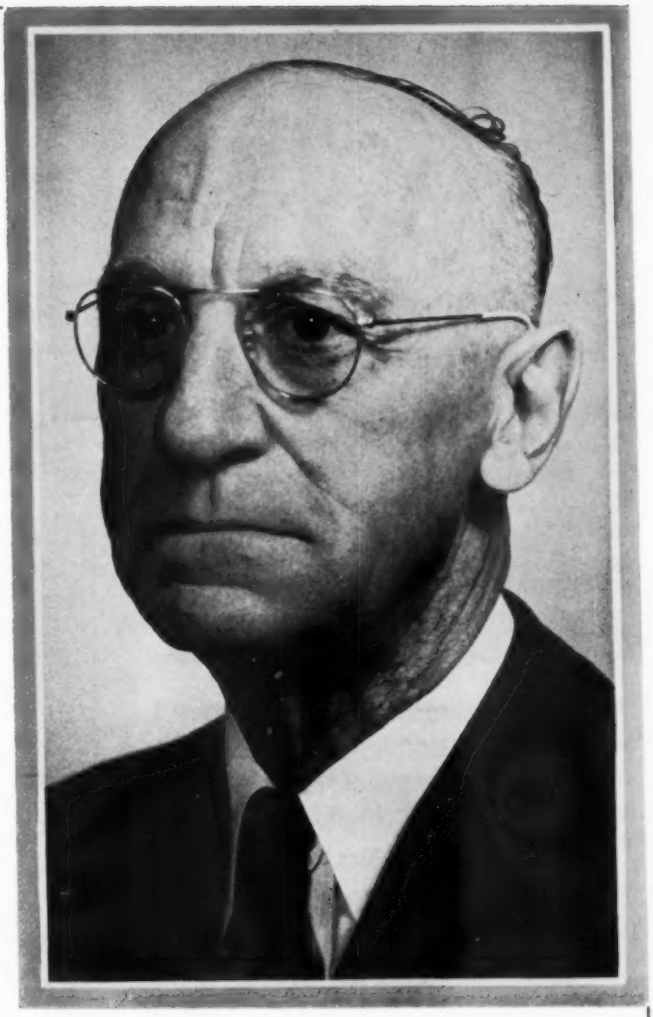
The vacuumizer is hooked up between STHT pasteurizer and homogenizer. Entrapped air and volatile odors are removed as milk falls through vacuum as a coarse spray. This machine handles 20,000 pounds of milk an hour.

What One Leading Jobber Says—

About the Outstanding Format and Editorial Content of the REVIEW.

"WE DO want to congratulate you upon the appearance of the AMERICAN MILK REVIEW – in fact, not only the appearance, but the whole makeup, and especially the very up-to-date articles appearing therein.

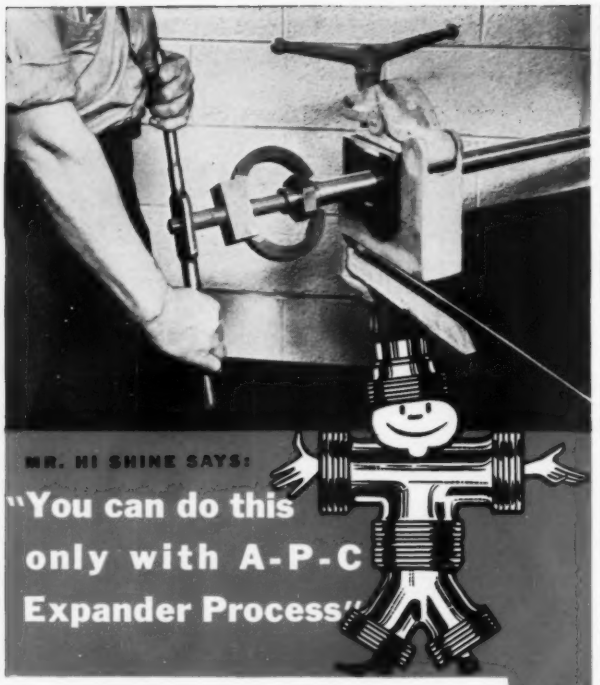
"We do not believe we have ever seen a publication 'perk up' faster than the AMERICAN MILK REVIEW has in recent years."



LEO A. BABCOCK
President and Treasurer
OAKES & BURGER CO.
Cattaraugus, New York

AMERICAN MILK REVIEW . . . Offers advertisers the largest national coverage in the fluid milk industry at the lowest cost per reader.

American MILK REVIEW

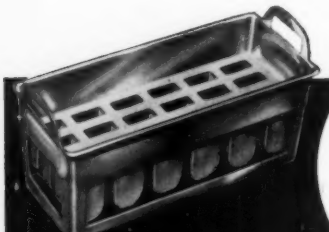


The operator is *removing* a ferrule from the sanitary pipe line. And that ferrule and tube can be re-used again and again. That's a big advantage found only in A-P-C's Expander Process.

A-P-C was first in the field with equipment to expand the tube to the ferrule in a tight, leak-proof solderless joint. And A-P-C's Ferrule Puller is unique today in its ability to remove the ferrule for economical use when a pipe line system is to be changed.

Just another example of the engineering and development that make A-P-C Fittings the logical choice for the alert plant operator.

Walter J. Wachowitz,
President



ICE CREAM MANUFACTURERS

The New A-P-C All-Stainless Stick Confection Mold!

SMOOTH, FLUSH STREAMLINED CONSTRUCTION. EASY TO CLEAN; EASY TO KEEP CLEAN. DESIGNED FOR FULL BRINE CIRCULATION. STRONG, STURDY. FULLY GUARANTEED.

ALLOY PRODUCTS CORP.
WAUKESHA, WISCONSIN

COSTS IN OREGON MARKET SHOWN

Market Administrator's Figures Place Cost of Processing and Distribution at 7.5 Cents

It costs Portland milk distributors 7.5665 cents per unit to process and deliver 72,856,119 units of milk and cream during 1950, according to figures released recently by the Oregon Milk Marketing Administration. 1950 costs of handling a unit of dairy products were slightly lower than similar costs in 1949 when the unit figure was 7.66184 cents, but higher than they were in the years between 1945 and 1948 when successive annual audits showed unit costs of 4.6843 cents in 1945, 5.2769 cents in 1946; 6.2105 cents in 1947; and 7.1508 cents per unit in 1948. Approximately half of the distributor's costs in 1950 was for labor.

Ninety-four per cent of the milk distributors' volume consisted of milk in various forms, the other six per cent of the volume being high-butterfat products ranging from 10 per cent butterfat content to whipping cream. Thirty-two per cent of the products sold was in the form of "standard" milk; 43 per cent was in homogenized milk; 10 per cent was a premium grade of milk, including "5%"; and 9 per cent of the milk volume was in the form of skim milk, buttermilk or chocolate flavored products. A high butterfat product containing 10 per cent butterfat, variously known as "Half and Half" and other trade names, accounted for one-third of the sales among cream products.

Home Deliveries Top Store Sales

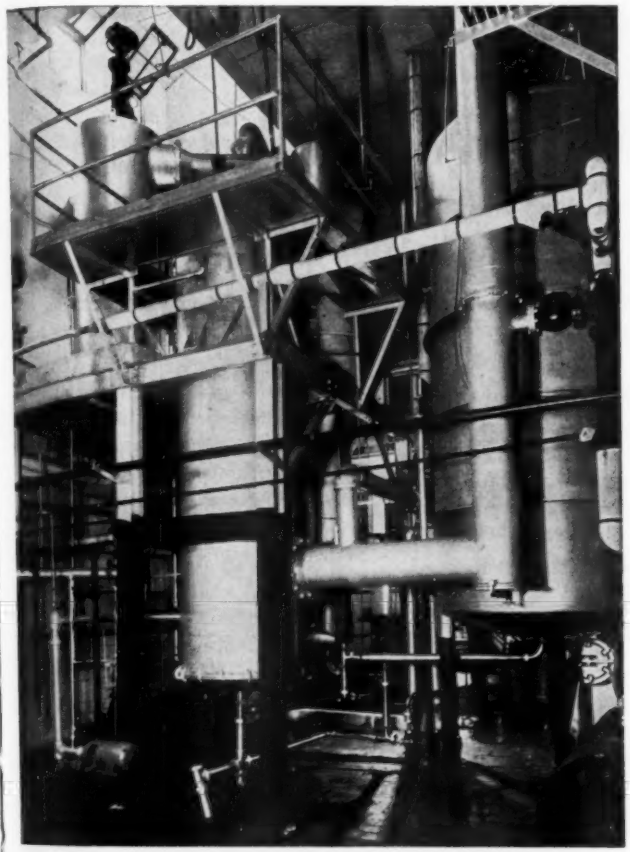
Milk delivered at homes exceeded sales made by stores, the Administrator's audit summary reveals. Home delivered milk accounted for 55 per cent of all sales made in quart containers, with 45 per cent of the quart units being sold at wholesale to stores, restaurants and institutions. Delivery costs to retail customers were found to be 4.2 cents per unit compared with delivery costs of 2.15 cents per unit to wholesale buyers. When coupled with a store margin of two cents a quart for handling, delivery costs to buyers at stores and at homes are practically identical according to the administration figures.

The 1950 cost data compiled by the Milk Marketing Administration accounts for approximately 84 per cent of the total sales made in the Portland area in 1950 according to Administration estimates. The remaining 16 per cent of the sales is divided among small dealers, including producer-distributor type dairies whose accounting is not sufficiently detailed to permit satisfactory analysis of cost data.

When sales values are computed on current wholesale and retail prices for units of various kinds sold, and raw milk costs are likewise computed at rates being paid now, the Portland milk dealers net profit should be 6 per cent of gross sales before income taxes, says Thomas L. Ohlsen, Administrator. "However, labor costs in the 1950 audit were computed before an increase in wages was negotiated with dairy workers on May 1, 1951, which are reported to have increased wages nine per cent. If labor productivity remains the same after the increase as it was in 1950 this adjustment would increase processing and distribution costs approximately three-tenths of a cent per quart."

GREATER PROFITS FROM LOWER OPERATING COST

With the demand for highest quality concentrated milk increasing, you may decide to install a new evaporator or add an Effect to an existing installation. When you do, it will pay you to remember that the operating cost of an evaporator is far more important than the initial cost. With production costs climbing, savings in fuel become doubly important. BUFLOVAK Multiple Effect Evaporators offer the greatest profit-building economies. Frequently, differences in initial cost are quickly recaptured and pay big future dividends.



Steam literally does double duty in a BUFLOVAK Double Effect Evaporator . . . fuel and water requirements are slashed down the middle. And, in a BUFLOVAK Triple Effect installation equipped with a Vapor Heater,* savings in steam reach 67%, cooling water 80%. These savings are in comparison to single effect operation. Further economy is enjoyed by the recovery of valuable solids.

Coupled with top quality and quantity production, BUFLOVAK is your most profitable investment.

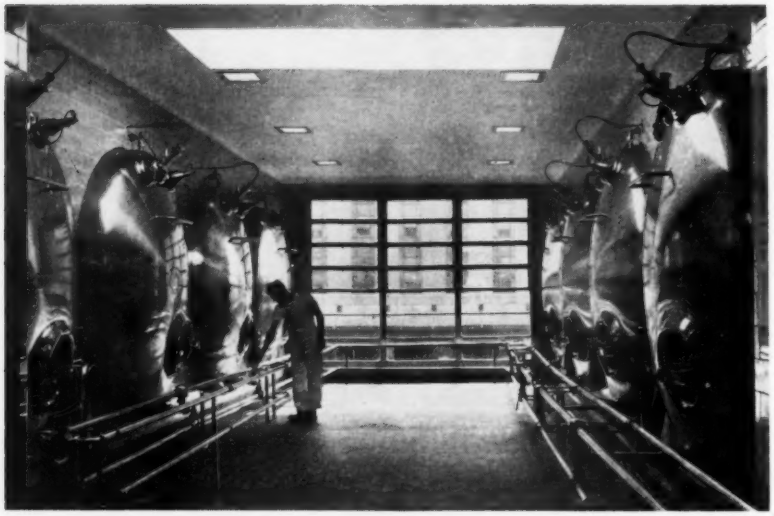
*BUFLOVAK Vapor Milk Heater can be furnished with new equipment or fitted into existing installations.

Buflovak **EVAPORATORS**

PREHEATER *(Steam Type)* **. . . Speeds production, cuts cost. Quickly closed for operation; easily opened for thorough cleaning. No parts to disassemble; no gaskets to replace. Completely sanitary.**

Write for Bulletin 343

BUFLOVAK EQUIPMENT DIVISION
OF BLAW-KNOX COMPANY
1627 Fillmore Avenue Buffalo 11, N. Y.



These eight new storage tanks, recently installed at Abbotts Dairies in Philadelphia, are, in addition to their shining magnificence, representative of additional milk handling progress. Agitated by air and hooked up to a central control panel they are "modern" in every sense of the word.

Cooling and Controlling Milk THE MODERN WAY

Air Agitation, Central Control Stations, Are Major Elements In Present Day Methods of Handling Large Volumes of Milk With Ease and Accuracy

By JACK MEYER

THE COOLING and storage of milk in eight new ammonia-cooled tanks at Abbotts' fluid milk plant in Philadelphia is greatly simplified by combining in-the-tank cooling, air agitation, and a central control panel which shows the operator exactly what is going on in each tank. The necessary close coordination between the operator in the cooling and storage room and the crew of the receiving deck, one floor beneath, is provided by an interdepartmental telephone located in a special cabinet at the control station.

Among the many advantages offered by the new system, the following are outstanding:

Clean-up time is shortened due to the elimination of mechanical agitators.

The operator controls the lights, refrigerant, and agitation air for each tank from a central station.

The temperature and level of the milk in each tank is indicated at the control station.

A continuous record of the temperature in each tank is provided on a single roll-type chart.

Two grades of milk are kept entirely separate by physical separation of tanks and separate grouping of controls.

When Abbotts' engineers designed the new cooling and storage room, they decided to apply various new techniques that had been developed by the industry, many of which had ceiving deck, two floors beneath, is already been tested in their plants, in order to obtain maximum efficiency and sanitation.

Jack Meyer, the author of this article on cooling and storing milk, is no stranger to the American Milk Review. A graduate of Cornell University where he studied under such well known Review personalities as "Bob" Holland and "Jim" White, Mr. Meyer has been up to his ears in milk processing problems ever since. As a member of the Brown Instrument Division of the Minneapolis-Honeywell Regulator Company he has consulted with milk dealers the country over on their problems. This is the story of a modern solution to an ancient problem.

Air Agitation

Abbotts' dairies have standardized on the agitation of milk by air rather than mechanical means wherever possible, as they have found that this method gives them less churning and less foaming, in addition to eliminating propellor drive shafts as a cleaning problem and possible source of contamination.

Centrifugal compressors pump filtered air into an accumulator tank. Air from this source is bubbled through stainless steel sanitary pipes, which rest on the bottoms of the storage tanks. These are disassembled and cleaned when the tank is washed, to eliminate the possibility of contamination from this source.

The temperature of the milk in each of the eight storage tanks is measured by a potentiometer which is connected

"MILK ON THE WAY UP." Plant telephone helps to synchronize operations of receiving room and storage and cooling room. Two grades of milk are handled at Abbott plant, with four of the storage tanks being used for each grade. Buttons on panel control air for agitation, refrigerant, and tank lights.

CENTRAL CONTROL PANEL, shown in photograph at right, gives operator complete information as to quantity, condition, and location of milk in storage. Recorder at left indicates and records temperature in eight different storage tanks. Push-button panel at center is equipped with signal lights to show whether milk is being agitated and cooled. Level gauges at extreme right show quantity of milk in each tank.

through permanent conduit-enclosed wiring to a skin-mounted thermocouple at the rear of each tank. This temperature sensitive element measures the temperature of the milk through the inner wall of the tank, transmitting it by wire to the recording instrument. Since the thermocouple does not penetrate the tank wall, this system completely eliminates separable thermometer wells. Like air agitation, this method of temperature measurement eliminates another cleaning problem and possible source of contamination.

Each of the eight tanks is clearly identified on the chart produced by the instrument, since each printed impression is numbered and color-coded. A small + sign, printed next to the identifying numeral, shows the exact time and temperature on the horizontal and vertical graduations of the

At the right of the master control station is a tank of eight milk level gauges, which indicate the quantity of milk in each tank. These gauges are actually U-tube manometers, which measure the pressure of compressed air that is required to overcome the milk head pressure at the bottom of each tank. The compressed air bubbles slowly into the tank through a piece of one and one-half inch sanitary pipe, which is also removed for cleaning.

The milk level gauges on the tanks make it possible for the operator to tell at his central station just how much milk of each grade is on hand at any given time.

All operating controls, excepting the sanitary valves used to route the milk chart.

into the various tanks, are included in a single master control panel which is located at the center of the control station. One row of buttons controls the electric solenoid valves which regulate the supply of refrigerant to each tank, while another set controls the air solenoids for the various tanks. Red signal lights indicate when the valves are in the "open" position. Between the two rows of valve control buttons is another row of switches for turning on the tank lights.

Operation

Milk received at the plant is pumped directly to the tanks without passing through any additional cooling equipment. All piping for "A" and "B" milk is separate, so that there is no chance of accidentally mixing the two grades of milk. The operator at the central control panel is notified by phone as soon as milk begins to flow to the storage tanks, so that he can turn on the refrigerant and air supply valves. If there is any delay in the flow of milk, a warning is phoned to the operator so that he can keep a close check on the tank temperatures in order to prevent freezing of milk in the tanks.

Both grades of milk are cooled to about 35°F and held at that temperature until used. The eight storage tanks each have a capacity of 4,000 gallons, giving a total storage capacity of over 32,000 gallons of milk.

The potentiometer, purchased and delivered well in advance of the actual installation date, was borrowed by Abbotts' Ice Cream Division for experimental work while the tanks were being fabricated and installed. The potentiometer was used for research work, conducted on behalf of a group of independent ice cream manufacturers, to obtain basic information regarding the rate of hardening of ice cream in various sizes of containers under different storage conditions.

In these tests, thermocouples were located at various depths in containers of soft ice cream, and temperatures were charted during hardening. Additional thermocouples were placed in containers located at various depths in the piles in the hardening room. By studying the record charts drawn by the instrument, researchers in Abbotts' Ice Cream Division were able to gather a great deal of valuable data on the effects of stacking, circulation, and air temperature on hardennig rates.

PENN STATE SHORT COURSE

The annual winter short course in market milk at Penn State will be held from January 28 to February 9, 1952. This course is primarily designed for workers in milk plants and dairies who feel the need of further instruction in the technical aspects of the handling and processing of fluid milk and related products commonly marketed by milk dealers. Those interested should write to A. Leland Beam, Director of Short Courses, School of Agriculture, State College, Pennsylvania, and request the Dairy Manufacturing Short Course Bulletin and an application blank.

XUM

Let's Talk Accounting

By JIM KLUGER

Cost Accounting

JUDGING BY my correspondence, and questions asked in the field, an increasing number of milk dealers are becoming more cost conscious than they were ever before. And they should be. As never before in our history, profits in legitimate manufacturing and merchandising are going only to those who know and control their costs to the greatest extent possible. Among the smaller and medium sized dealers this trend is especially forced, for those people can no longer depend on being tails to be wagged by the bigger fellows. And consider, too—throughout the land the two largest elements of total cost—milk and labor—are almost dictated, for large and small milk dealer alike.

As a necessary corollary to cost consciousness, cost accounting among milk dealers is coming in for its share of interest and inquiry. I've been asked literally hundreds of times whether it's more profitable to buy cream or separate it, at a given series of prices. Whether such and such a product is profitable at this selling price or that. Whether federal market milk or so-called "outside" milk is the better buy at one price or another. By far, the books kept by the majority of milk dealers can't even hint at the answers. The usual records will show, at the end of a period: sales, minus expenses, equals profit. How much of that profit and what portion of those expenses are ascribable to the different product lines remain a mystery. At any time, when a quick decision is necessary, knowledge of costs is a must. The impact of marketing orders, state and federal, introduces a further complication into an already over-complicated situation.

In spite of every dealer's keen awareness of the necessity of having timely cost data, most of them shy away from cost accounting as a still further complexity to be avoided by any means. Possibly, that attitude stems from miscomprehension as to what cost accounting is and can and cannot do. First—it cannot guarantee a profit. It can, however, point out wherein are the profitable items, and can point out why an item may be unprofitable. It is not within the scope of these notes to describe a complete cost accounting system tailored to fit a set of hypothetical circumstances but if some misconceptions can be corrected and an understanding of fundamentals methods gained, that is something.

Jim Kluger, specialist in dairy accounting, conducts his exclusive column in the "American Milk Review" each month. If you have an accounting problem or simply an accounting question write to Mr. Kluger at Kapleau, Kluger & Company, 1414 South Penn Square, Philadelphia, Pa. He'll do his best to give you the straight dope.

Reduced to its simplest terms, production cost accounting is but a means of finding out what a given unit of product costs to make or to put in shape for sale. You have probably heard the terms "job order" costing and "process" costing. The first, job order, is used when the product can be readily identified as a unit, such as an automobile. The costs of all the materials, labor, and overhead are added to the car as it moves along the line. When it is finished, the total cost of the car identified as number so and so is known. The process cost method is used when the unit cannot be readily identified, as a quart of milk. You cannot follow a quart of milk from the farmer's can, through the various processes and into the package. Therefore, the costs attendant on each process are collected and, when all is finished, are divided by the total quarts packaged to find the unit cost of one quart. That's all there is to it. The rest is just detail.

The total cost of any finished product is the sum of three things: materials, direct labor, and overhead. The materials going into a quart of milk are the milk itself, plus any additives, the package, and the closure. The direct labor is the so-called productive labor—the fellows operating the filler, those running the pasteurizers, etc., and overhead is everything else. Rent, depreciation, office help,

(Please turn to Page 77)

HTST TIMING on the milk itself!

...with turn-of-a-knob simplicity and high sustained accuracy

Here's a new, simple method for accurately measuring and recording holding time during high temperature short time milk pasteurization. It has been developed to fill a long-time need for a quick, reliable check that avoids plant shut-down, after-hour work and burdensome expense. Featuring the new Foxboro Timer, it offers many important advantages including:

- Holding time taken on actual milk for maximum accuracy
- Timing test can be made at any time without preliminary preparation
- No interruption of pasteurizer operation during timing test
- Less than 30 seconds required for test
- Test can be made by one man. Little skill required
- Highest sustained accuracy
- Accuracy of timing entirely unaffected by lag
- Timer makes permanent chart record of test available to health authorities
- Instrument requires practically no maintenance

Write for bulletin 433. **The Foxboro Co., 26611 Neponset Ave., Foxboro, Mass., U.S.A.**

FOXBORO
REG. U. S. PAT OFF.

Instruments that improve product uniformity

By CHARLES E. PATRICK

Postal Cards Can Move "Specials"

Properly Used As a Supplement to Route Salesmanship They Are a Good Tool

Exclusive feature

You know how it is, you pass a particular sign day after day, you finger a match book several times an hour, or you sit across a luncheon table from a friend wearing a new suit. You look at the sign, the match cover, and the new suit. But do you really see them? Well, maybe you do—if you are the unusual type, yet the chances are you look without seeing and studying them.

Housewives are that way, too. To them your driver-salesmen are apt to become merely the instrument through which milk is automatically delivered to their homes. Personal contacts are likely to be limited to several times a month to take care of collections. Considered from the standpoint of promoting special items such as cheese, butter and other dairy products this common condition is not conducive to upping sales volume—or enlisting the necessary cooperation of routemen.

Recognizing a situation and then doing something about it, of course, are two entirely different matters. But fortunately, lifting drivers above the role of automatons and at the same time boosting the volume of specials may simply require the studied application of some specialized post-card promotion. Now, don't brush off this idea with the comment, "I've tried that before." Perhaps you have. But if it did not pay off as you had anticipated the failure may be traced to the fact that housewives looked upon the cards as "just another advertisement" because they lacked individuality. They did not link the prospects' thinking with the routeman and your dairy.

By personalizing such cards customers' attention will be captured, drivers will be encouraged to make the necessary personal solicitations, and the volume of sales will benefit.

Routeman's Picture On Card

Instead of employing the conventional approach to buyers by simply listing the details of the special offer, postcard promotion will step ahead if the cards are given recognition value through the inclusion of the driver serving the individual homes to which the cards are mailed. The housewife fingering through her morning mail will be halted by a card that carries a picture she recognizes as her "milkman." She reads the printed matter and the invitation to enjoy a "special of the week" becomes a personal request rather than an "advertisement" from an inanimate plant. The net result is that she is pre-sold and extra good will is won for the driver as well as for the dairy.

These reactions of customers – proved through actual use of such

CYCLONE OF SELLING...

Gorgeous... Pumpkin Pie
Make one, two, or three of
America's most gorgeous
The Dairy Farmer Goes to Town
Gorgeous... Coconut Cream Pie
It takes BUTTER to make the best Christmas Cookies
MERRY CHRISTMAS
TREATS SUPREME
made with MILK and BUTTER and CREAM
YULE COFFEE
EGG NOG
New food ideas for the holidays
Ice Cream treats
AMERICAN DAIRY ASSOCIATION
Always Right ... Taste Delight ... ICE CREAM

Ads Ads Ads Ads Ads Ads Ads

32 MILLION OF THEM!

Cyclone of Selling! In the big November and December selling season the challenging spread and full-page, full-color ADA ads shown here will sweep the nation, 32 million strong, in promotion of MILK, BUTTER, CREAM, and ICE CREAM for irresistible Holiday Treats . . . carrying sales impact through stores in all communities in America. LIFE, AMERICAN WEEKLY, BETTER HOMES and GARDENS, GOOD HOUSEKEEPING, PARENTS', LADIES' HOME JOURNAL and McCALL'S will be used. Additional millions will be reached by Radio, Express Truck Posters, Editorial Food Pages and many other ways . . . a cyclone of Selling!

Holiday time is food-selling time. So in a bigger and better way than ever before, your ADA plan of concerted business action is applied to "SAY IT WITH *SALES*."

AMERICAN DAIRY ASSOCIATION

"VOICE OF THE DAIRY FARMER"

20 North Wacker Drive, Chicago 6, Illinois

personalized cards—contribute generously to building volume in themselves while producing another plus benefit. Drivers who have been advised in advance have an extra incentive to follow up the mailing and to push the special item featured in the promotion plan. As human beings they are flattered by the use of their pictures and experience an inward urge to "get in back of themselves." The success of the announced special thus becomes a personal challenge.

How Cards Are Prepared

The initial step in such a program is the photographing of the routemen, and the preparation of prints of approximately equal size. These photographs will be more effective if they are informal in so far as dress is concerned, and will reproduce better if they are clear but slightly on the contrasty size—that is, deep areas of darkness with adjoining sections of white. As the plan moves on through the production schedule the reading matter to go on the cards must be set in type prepared on "printing" typewriters, and sufficient cards printed to take care of an entire mailing. Of course, the individual lots of cards must show the picture of the driver serving the customers to whom the cards are to be mailed. The final step calls for addressing and then mailing the cards so that they will arrive a day or two before the salesman is scheduled to call.

The exact method used for preparing the cards will depend on the facilities of the dairy. In the office of some plants there may be a small size offset printing press that can be put to work turning out the mailing pieces. If offset printing equipment is not available, the reading matter may be processed quite effectively on a multigraph or mimeograph, and the halftone illustrations picturing the drivers run off by the printer who handles the other printing needs of the dairy. The cost of the special announcements will vary somewhat according to the printing process used, but the use of government postcards and thoughtful preplanning of the production will hold the cost of the mailed cards to pennies each.

To keep within a particularly tight budget when three or four mailings of the personalized cards are planned, it may be advisable to run off enough cards showing the pictures of the individual routemen to take care of all the planned mailings. Later, as the mailing dates approach the details of the special offers may be printed on the previously illustrated cards. Also, as mentioned previously, the preparation of the photographs of the drivers in prints of equal size will result in a saving. A number of such prints may be grouped together and placed before the engraver's camera at one time to be "shot" on one negative. This saving of exposures will be reflected in lower engraving costs.

When to Mail

Because the result of the postcard mailing depends on the novelty and unexpectedness of the pictured cards, the mailings should be spaced out to perhaps one every other month to avoid the danger of having the cards grow dull through repeated appearances in the mail boxes of the dairy's customers. Of course, the intentional spacing is not intended to stop the flow of other mail material that may be part of the plant's promotion schedule.

Because of the uncertainty of delivery in some areas it will be found desirable to make several test mailings of cards to employees to determine the approximate time required to carry such mailing pieces from the plant to the various sections served by the outside salesmen. In this way a fairly accurate schedule for mailing may be established. In practice it has been found undesirable to have such mailing pieces reach the homes of customers the day before a major holiday or on the first of the month when the mail is heavy with monthly statements from stores and utility companies. Season sales and other similar specials, of course, will be dependent on weather prospects in the territory served by the sponsoring dairy.

Post Cards Pin-Point Promotion

When weighing the cost of a mailing such as described here against the more general type of promotion in widely circulated media, it is essential to consider the cost-per-contact of the postcard plan. Each person addressed under such a program is known to be a user or live prospect for the products of the plant. In other media there may be five or six persons reached for every one who is concerned with the purchase of her family's dairy requirements. Since circulation usually determines media costs the plan that minimizes waste circulation will generally be found to be the most economical. In the controlled mailing of postcards there is little or no waste circulation.

If you feel that your customers have grown "used to" your routemen or are "blind" to the fact that driver-salesmen are really salesmen of a variety of dairy products you may wish to give the post card plan some serious thought. The total outlay for a two or three times mailing will not be great even though you may enjoy a response in sales and increased driver interest that will be both profitable and stimulating. Try it.

ICE CREAM MAN HONORED

Baltimore—L. Manuel Hendler, national as well as local Chairman of the Ice Cream Centennial, was honored with the presentation of a testimonial plaque in ceremonies in the office of Mayor Thomas D'Alesandro, Jr., on Tuesday, October 9th.

The plaque was presented by Mayor D'Alesandro in the presence of members of the Baltimore Ice Cream Centennial Committee.

The plaque, signed by Mayor D'Alesandro, Governor Theodore R. McKeldin of Maryland, and committee members including Edwin Blum, The Borden Company; Morris Carliner, Better Ice Cream Co., Inc.; LLee J. Crone, Arundel Ice Cream Co., Inc.; Seth W. Hetrtfield, Delvale Dairies, Inc.;; Walter F. Knox, Knox Dairy; Howard S. Kuhn, Brookwood Farms; John Krusen, Breyer Ice Cream Co.; Nathan Lebovitz, Hendler Creamery; Stanley R. Staples, Eckels Ice Cream & Dairy Co., and Curtis N. Stough, Good Humor Ice Cream Co.

It **CAN** *be done! . . .*

The "Vacuumizer" **DOES** *it**

*

Removes air from milk and milk products during the continuous High Temperature Short Time pasteurization process prior to homogenization.

What's more, the VACUUMIZER is adaptable to *ANY* HTST system.

Send for new, descriptive bulletin.

Patent applied for

Chester-Jensen Company

345 TILGHMAN STREET CHESTER, PENNSYLVANIA

New Antibiotic Control Program Tackles Difficult Problem

By W. A. KRIENKE

Progress is not without its penalties. The advent of the so-called miracle drugs has been a boon to the producer in his ceaseless battle against mastitis. The potency of the drugs, however, has carried over into the milk and presented a number of problems to the milk processor. This article, by Mr. Krienke of the Florida Agricultural Experiment Station, outlines a program, promulgated by the American Dairy Science Association, to cope with the difficulty.

ANTIBIOTICS, when present in milk, (1) are responsible for lactic starter failures, (2) may result in total losses of skim milk intended for cottage cheese or for cultured buttermilk, and (3) may retard or prevent proper acid development in cheddar and other types of cheeses.

Officers of the American Dairy Science Association recognizing the magnitude of potential financial losses to the dairy industry of our Nation established the Committee on Antibiotics in Milk, consisting of eight members to accumulate factual information on this challenging problem. The committee's report resulted in the adoption of a resolution by the association that urged an educational program among all organizations and individuals concerned with the production of milk.

The Resolution

(Journal of Dairy Science, Vol. 34, No. 8, p. 833 & 834, August, 1951.)

WHEREAS: Antibiotics have proven beneficial in the treatment of mastitis, and

WHEREAS: Research has shown that milk obtained from treated quarters of the cow's udder contains appreciable quantities of antibiotics through the sixth milking (72 hours following the final treatment), and

WHEREAS: It has been shown, for example, that even small quantities of penicillin will inhibit or retard lactic acid production in the progress of manufacturing cheese, buttermilk, and other dairy products which are dependent upon growth of lactic acid forming bacteria, and

WHEREAS: Substantial economic losses may result from the production of inferior products or from the total loss of milk intended for processing, and

WHERAS: It appears that the best approach to the solution of this problem lies in informing producers regarding these facts.

Therefore, be it RESOLVED: That The American Dairy Science Association give full support to the solving of this problem by:

(1) Urging all dairy associations that have dealings with producers to foster a program of producer education in cooperation with manufacturers of antibiotics, designed to give producers an understanding of the correct use of antibiotics.

(2) Urging manufacturers of antibiotics to omit or alter statements in advertisements which may be construed to imply that milk from treated quarters can be used without a waiting period after treatment.

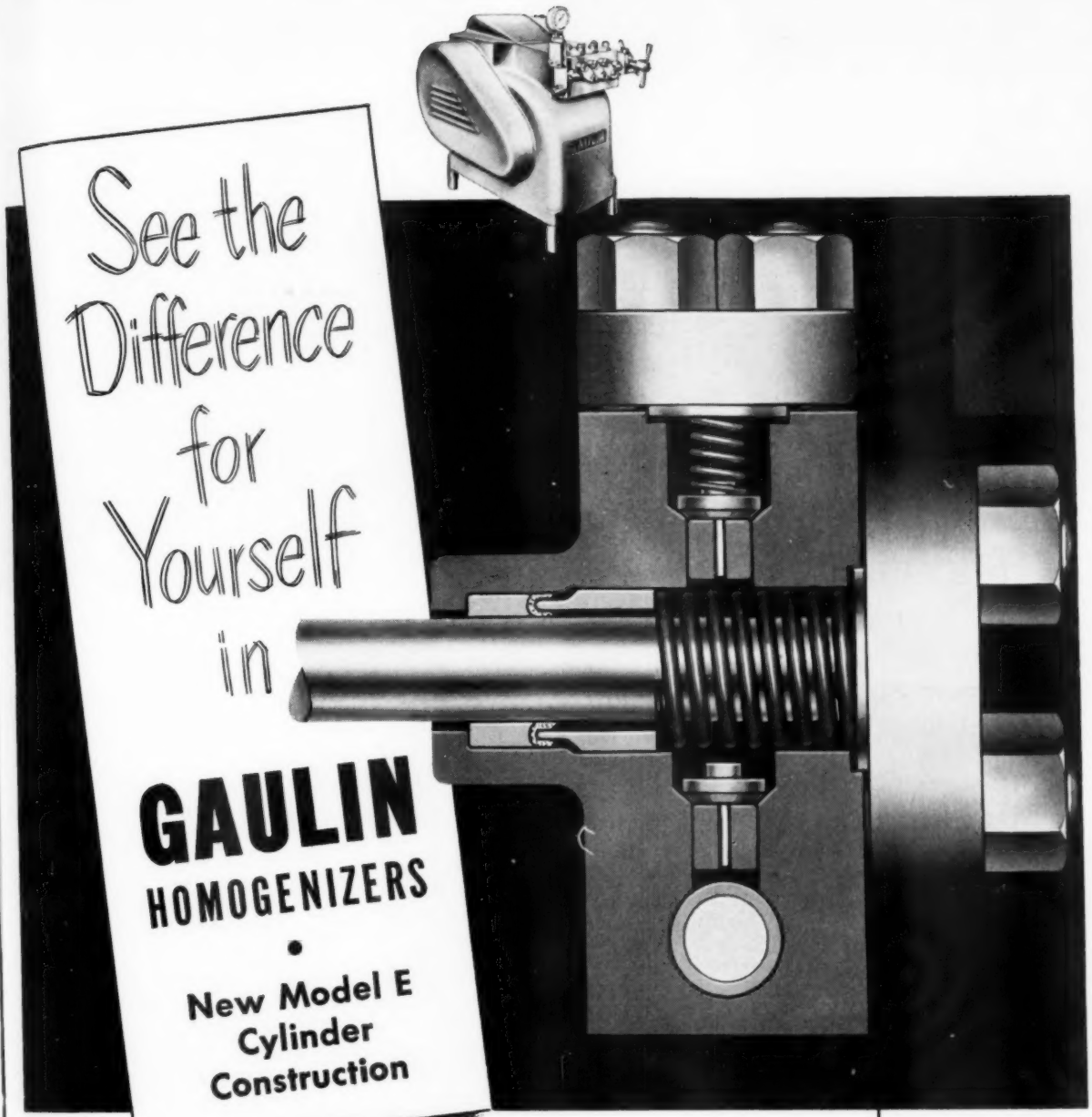
(3) Asking state and federal agencies to give serious consideration to the enactment of laws and/or regulations requiring containers of antibiotic preparations intended to be marketed direct to farmers for mastitis control to carry the following statement in a conspicuous place on the label of the product: "Important! No milk obtained from a mastitis treated quarter within 72 hours (6 milkings) after the last treatment with this product is to be marketed."

Copies of the resolution were mailed to more than 200 organizations in order to stimulate action on the proposed educational program. The assistance of everyone concerned with the production of milk solicited.

Emphasis should be directed to the fact that unless dairy farmers are aware of the problems created by antibiotics in milk it is unlikely that normal appearing milk will be withheld from the supply going to the dairy plants. Therein lies the educational program. The information must reach the man on the dairy farm responsible for the milk in the can or in the tank truck. Certainly the plant field-man, making personal contacts, should be most effective in this program of informing the producer that antibiotics in milk have already been responsible for considerable losses to the dairy industry because of lower quality cheese or because of total loss of vats of skim milk cultured for buttermilk or for cottage cheese.

Although there are differences of opinion as to the length of time that milk from a mastitis treated udder should be withheld from the market, from the standponit of antibiotics used in the treatment it is recommended that six complete milkings of the treated quarters be segregated. Some research work has indicated that a somewhat longer period of time is necessary to completely free the milk of certain antibiotics. It is thought that this is related to the nature of the ointment in which the antibiotic is dispersed. Therefore, it may become necessary to change the recommendation on this factor of time, especially if further changes are made in the ointment vehicle to make it more difficult for the flow of milk to wash it from the udder tissues. However, if the six-milkings segregation period (72 hours after the final treat-

(Please turn to Page 77)



NOW, FOR THE FIRST TIME — a cylinder block that's all in one piece. No seams, joints or crevices to collect bacteria. Just one smooth stainless-steel surface that's the ultimate in sanitation . . . perfect alignment . . . and vibrationless service.

Note too, the larger, more efficient valves on the Gaulin Model E cylinder. They permit shorter valve travel . . . faster valve action. Reduce wear and give you years more low cost, dependable service.

And check the spring-loaded plunger packing. It's self-adjusting. Eliminates large stuffing boxes, threading glands and wrench adjustments. Saves you real time in disassembly, washup, and assembly.

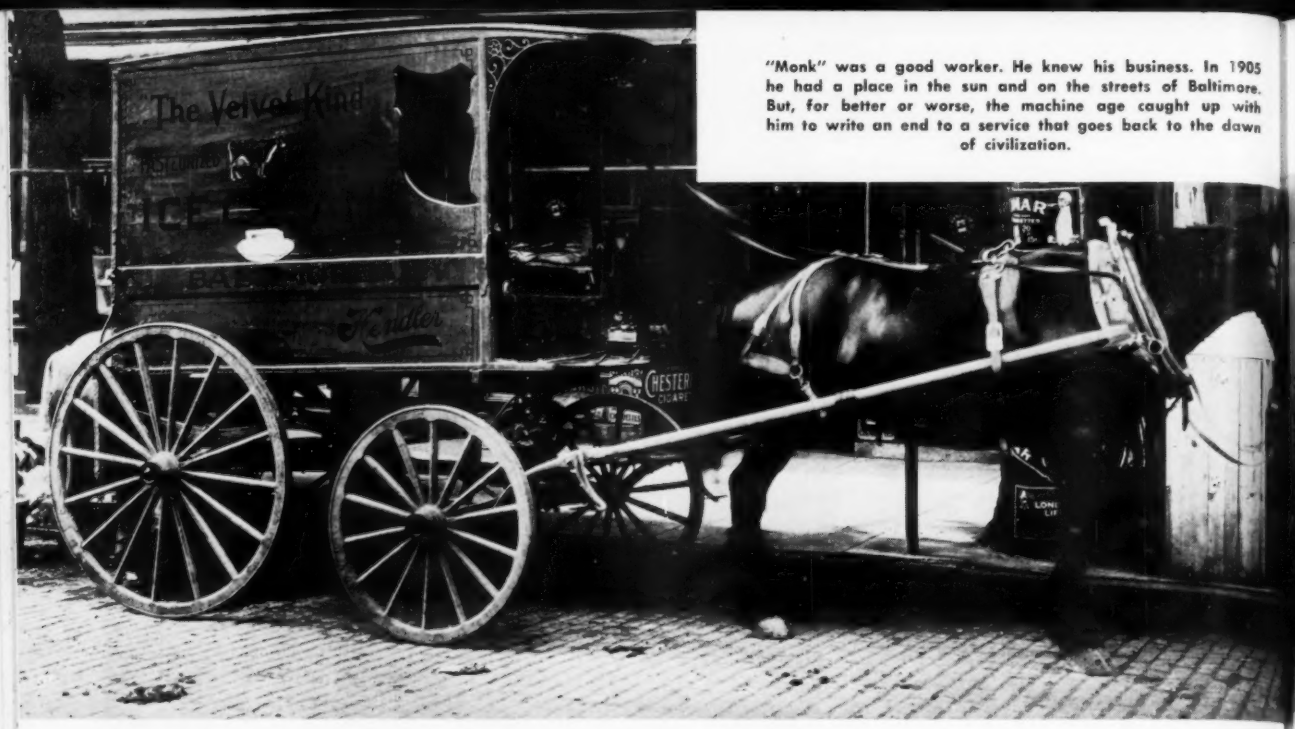
There are *many more* exclusive advantages to Gaulin Homogenizers. Compare them! And you'll prove they're your best buy now, and for the years ahead. *See* the difference for yourself — call your local Gaulin Jobber. Or write for Bulletin 831.

Look to GAULIN for

- More complete homogenization
- Positive viscosity control
- Convenient cleaning
- Efficient slow-speed drive
- Forced feed lubrication
- Little or no maintenance
- Low-cost, dependable operation

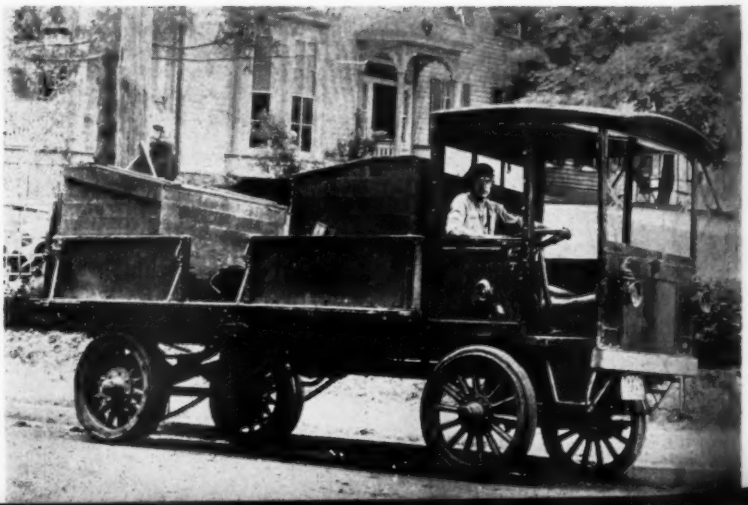
MANTON-GAULIN Manufacturing Company, Inc.
49 GARDEN STREET, EVERETT 49, MASSACHUSETTS
World's Largest Manufacturer of Homogenizers

Gaulin TRADE MARK



"Monk" was a good worker. He knew his business. In 1905 he had a place in the sun and on the streets of Baltimore. But, for better or worse, the machine age caught up with him to write an end to a service that goes back to the dawn of civilization.

The search for the right combination is plainly evident in this picture of an electric truck that was used in 1919. The horse was gone and the electric truck versus the gas driven truck was a matter of debate.



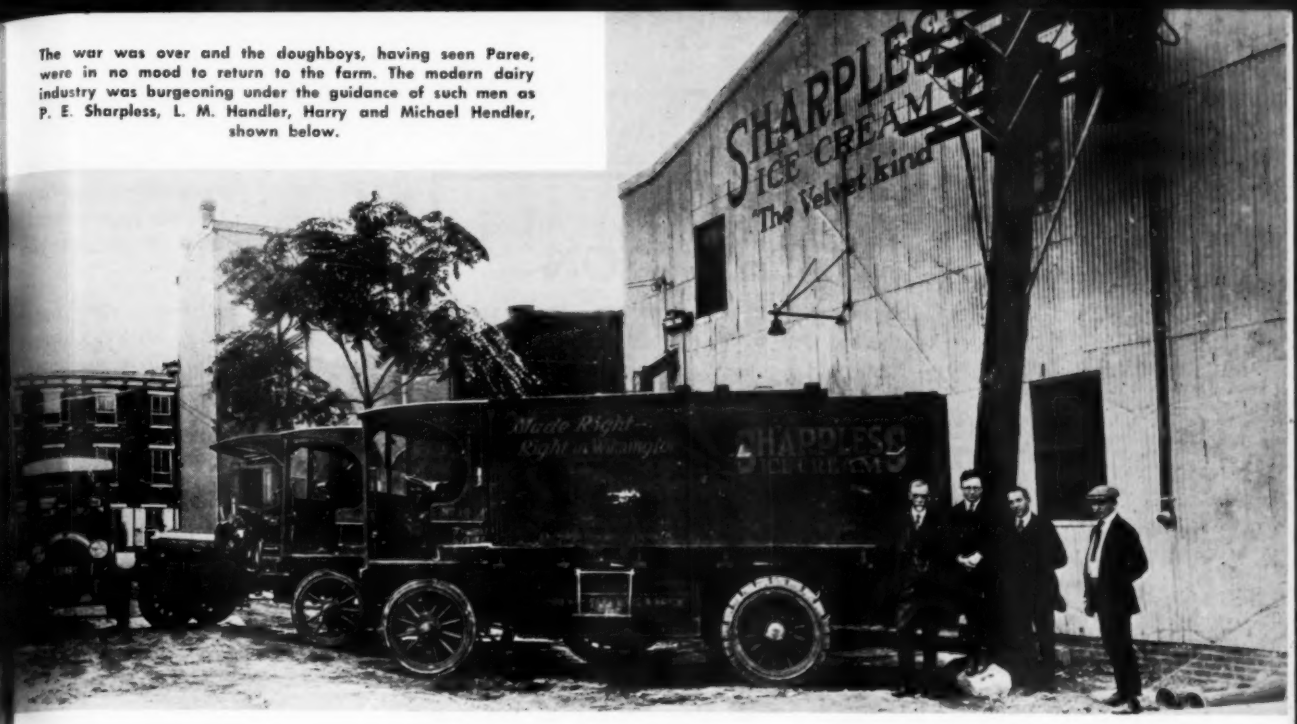
Thirteen years saw great changes in the ice cream business and in transportation. By 1918 old "Monk" had been replaced by this rumbling monster. The market for ice cream was growing.

Not Very

WE WHO LIVE in the mid-twentieth century are inclined to forget the rapidity of our material evolution. In the space of a few years we have gone from a system of transportation that had endured for ten thousand years to the vast complicated network of roads, and rails, of air lines and ocean highways that is transportation today. Such tremendous changes as these are not made without corresponding changes in the minds of men. As the horse gave way to the machine so did the

XUM

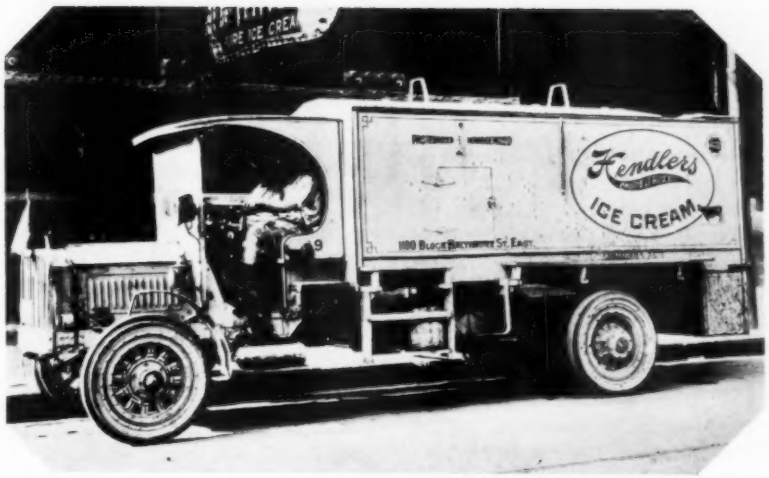
The war was over and the doughboys, having seen Paree, were in no mood to return to the farm. The modern dairy industry was burgeoning under the guidance of such men as P. E. Sharpless, L. M. Handler, Harry and Michael Hendler, shown below.



Long Ago

concepts of business relationships undergo a metamorphosis.

In the series of pictures that follow the evolution of conveyances used for distributing ice cream is vividly displayed. The Hendler Creamery company, whose trucks are shown on these pages, is still doing business in Baltimore and at the same address that it had in 1912. The period covered by these pictures is from 1905 to 1921. The photographs speak eloquently of the disintegration of one era and the birth of a new one.



By 1920 the modern ideas of refrigerated trucks, pasteurization, homogenization, and display advertising had made remarkable progress. Compare this truck with its predecessor of 1918, a matter of two years.

The breaking away from the old traditions was a primary characteristic of the "twenties". This unique arrangement, attempting to combine spectacular advertising with mechanized distribution, demonstrates that tendency.

WASHINGTON REPORTER

By HAROLD E. CHRISTIE

Taxing Co-ops

THE FIGHT over taxation of co-operatives—being waged on the floor of the Senate as this is written—will probably be finally solved in conference between House and Senate Committee members rather than by Senate Action. Because a few cooperatives have testified in favor of the cooperative taxation provision of the Senate Bill, it is believed that it will remain in that body's version of the tax bill. But it isn't in the house version, which continues the present status-quo, and therefore will become a matter to be ironed out in conference.

The proposed tax on unallocated reserve funds will raise very little revenue. A few cooperatives are required by state laws to retain unallocated reserve funds as a guarantee against losses, and such cooperatives would face taxation. Most of the others would probably allocate their surpluses, making the taxation question one of unimportance. Milk cooperatives appear to be hardest hit by the present program, since a larger percentage of them operate under state laws which require such retention of funds.

Biggest complaint against the law as it would be if the present Senate version is finally confirmed would be the effect on new cooperatives. There would be no incentive for the formation of such cooperatives. They would not be allowed to retain funds during the early trying years as a cushion against business contingencies.

Containers and Packaging

THE NATIONAL Production Authority's quarterly report on the containers and packaging industry indicates a slight easing in demand during the second quarter of 1951 for all types of containers; but points out indications for a general increase in most lines for the remainder of the year. Principal reasons for the upswing was the normal heavy seasonal requirements for processing fall-harvested foods, the report said.

The report pointed out many of the voluntary conservation measures which were being used to spread the available supply; but indicated that in many trades there was a distinct feeling of pessimism that such voluntary programs as standardization and simplifications of sizes and design, or use of alternates and re-use of existing containers would be enough to insure an ample supply for the months ahead.

Reports on some of the individual types of containers which are of greatest importance to the dairy industry show:

Glass containers. Production and shipments exceeded 30 millions in 2nd quarter. There is an adequate supply of raw materials for most glass containers. Selenium, required for clear transparent glass, is in short supply. Industry as a whole is still working below capacity, can increase production to meet estimated needs.

Closures. Milk closures were down 13.7 percent in 2nd quarter from previous month. No supply problem anticipated.

Textile bags. High cost of materials has forced down production of burlap bags; but most of this has been replaced with cotton which is in ample supply at present.

Milk bottle crates. Box plants report satisfactory inventories of lumber; but steel is still below normal requirements.

Foil. NPA has ordered aluminum usage restricted to 65% of base period.

Set-up boxboard. Production up 7.7% during 2nd quarter. Looking ahead, supplies of kraft paper, metal foil and transparent wraps are all reported low.

Nested food containers, paper cups. Demand continues to exceed supply. Production was only 90% of capacity, primarily because of shortages of basic bleached chemical pulp needed for sanitary food container stock.

Paper milk containers. Heavy demand from armed forces installations and from industrial plants for in-plant feeding created an order back-log in excess of the industry's ability to produce. No immediate prospect of catching up this lag because of lack of adequate production facilities and shortage of raw materials.

Dairy Equipment Inventories Low

AN INDUSTRY advisory committee told the National Production Authority in late September that dairy equipment manufacturers' working inventories would be depleted by the first quarter of 1952 unless they were allowed more controlled materials. They also reported that tests by mills on substitutes for nickel-bearing stainless steels had proven unsuccessful as well as costly. The use of chrome stainless steel is subject to corrosive attack and it parted at welds.

It's a Rather Gloomy Picture . . .

THE AGRICULTURE Department is still battling for an essential rating for farmers and food processors so that they may obtain necessary fertilizers, machinery, equipment; but it is a rather gloomy picture, right now. Present indications are that the military establishments is stepping up its use of scarce metals, chemicals, and equipment or machine tools needed for production. And the military is scheduled to get what it wants, with the remainder divided as evenly as possible among other users. Trouble is that the production isn't keeping up with the increased demands, and present estimates are that first-quarter, 1952, allotments to civilian users will be at least 10% lower than present insufficient allowances. USDA officials are

THE MARINE MIDLAND TRUST COMPANY OF NEW YORK

CHAMBERS STREET OFFICE

Chambers at West Broadway

JAMES M. KELLY - - *Assistant Vice-President*

WHEN SHIPPING DAIRY PRODUCTS TO NEW YORK YOU WILL FIND THE COLLECTION OF DRAFTS GREATLY FACILITATED IF THEY ARE DRAWN THROUGH OUR BANK. WE ARE LOCATED IN THE HEART OF NEW YORK'S WHOLESALE FOOD MARKETS AND ARE PREPARED TO OFFER FAST AND EFFICIENT SERVICE TO ALL SHIPPERS OF PERISHABLE FOODS.

We Cordially Invite Your Patronage

MEMBER

MARINE MIDLAND GROUP OF BANKS
FEDERAL RESERVE SYSTEM

NEW YORK CLEARING HOUSE ASSOCIATION
FEDERAL DEPOSIT INSURANCE CORPORATION

make your CHERRY-BURRELL REPRESENTATIVE Your Cleaning Consultant

Regular, thorough cleaning of your processing equipment is essential if plant efficiency is to be maintained. But, improper cleaning solutions may actually be *lowering* efficiency, *shortening* the useful life of your equipment . . . poor cleaning practices may be wasting valuable man power.

Your Cherry-Burrell representative knows machines and processes. He stands ready to act as consultant on your cleaning problems. You can rely on his advice because every recommendation is backed by Cherry-Burrell's long experience and research in every phase of equipment cleaning. He can help you choose from a full line of washing compounds the one best suited to your needs — and at the lowest cost.

Call your Cherry-Burrell representative today. He can help you establish a complete and effective program of Planned Maintenance to protect your plant, production and profit.

CHERRY-BURRELL CORPORATION
General Sales and Executive Office:
427 West Randolph Street, Chicago 6, Illinois
Milk and Food Plant Equipment and Supplies
FACTORIES, WAREHOUSES, BRANCHES, OFFICES OR DISTRIBUTORS AT YOUR SERVICE IN 56 CITIES

trendmaker in a great industry

least 10% lower than present insufficient allowances. USDA officials are afraid it may be as high as 20-25% in steel for farm machinery.

Even greater USDA worries center around fertilizers, necessary for the food and feed production the Department is asking of farmers. In this line, production is actually up, but demands are up far more. Records of the fertilizer production companies showed that 1950-51 showed a record-breaking production which was up 25% in nitrogen, 8% in phosphoric acid, and 28% in potash over the previous year—yet USDA crop goals are being adjusted downward in many fields because this fertilizer production just isn't enough to grow the amounts of food requested earlier.

Decontrol on Agricultural Products?

THERE'S CONSIDERABLE talk in Washington circles about a complete decontrol on all agricultural products. Officials scoff at it, say it can't be done if a controls program is to be maintained; but there is enough strength in Congress to make it worth watching. With most agricultural products below parity anyway, it's pretty difficult to establish controls on such a fluctuating floor. Best guess is that slaughter controls won't be revived, the ban on dairy products importation will be lifted, rest of controls tightened, but only a little.

Milk Costs Up

AN AWARD just made to the Ritchfield Dairy to provide milk for the various government-supported institutions in the District of Columbia shows dairy products generally up above prices paid in previous years, according to Roland M. Brennan, District Purchasing Officer. He cited the fact that while milk delivered in half-pint containers was shaded downward a fraction of a cent, the bulk of the milk purchased was in quart or larger containers and these were a cent per quart higher on an average.

The new contract called for payment by the District to the Ritchfield Dairy of $54,758 for milk deliveries during the three months of October through December, 1951. Contracts for similar amounts delivered during the July through September quarter called for only $52,645 in payments.

Washington, D. C., Milk Prices

AN ALL-TIME high for the Washington, D. C., area was assured on September 27 when the Board of Directors of the Maryland-Virginia Milk Producers Association voted to increase the price to dairies by 41c per cwt. This approximate 9/10ths cent per quart was immediately passed on to the consumer when all dairies in the area announced a 1c per quart increase in milk prices effective October 1.

The Producers Association, which has a virtual monopoly on milk sales in the Nation's Capital and surrounding areas, said the increase was necessary because of the summer drought which had burned up most of the Maryland and Virginia pastures and because of a critical labor shortage in the area which required hiring more expensive labor or payment of overtime to present workers.

OPS GUIDE ON FLUID PRICES

Office of Price Stabilization officials early last month informed members of the Fluid Milk Industry Advisory Committee that the National office is preparing a guide to assist OPS field offices in the handling of petitions for adjustments in fluid milk ceiling prices.

A recently issued OPS regulation, SR 63 to GCPR, set up a formula for adjusting fluid milk ceilings by marketing areas to allow for labor and certain other costs which have increased since a base period, January 1-June 30, 1950, and to pass through producer price increases. Authority to make these adjustments was delegated to OPS field offices within the areas.

The step was taken because of the perishability and local character of fluid milk and the fact that there are hundreds of milk marketing areas of varying size, each with peculiar local problems.

The field guide now being prepared, agency officials said, should be of great value in aiding local OPS officials to reach decisions on petitions for adjustments. It is possible, they added, that a model area milk price regulation may be prepared for the guidance of field offices.

Petitions for price adjustments have already been filed in the Chicago and Gary, Ind., marketing areas.

Committee members had expressed fear at the meeting that, because of the large number of OPS field offices, more than 100 in all, some of them may not be staffed with officials who are adequately familiar with the problems of the fluid milk industry and that this might delay action on petitions.

Committee member also recommended that the basic regulations, SR 63, be amended in a number of respects, including the addition of a provision to state that the "specified" producer price, which must be listed in the area regulations, be on an average basis.

They declared that milk distributors in some areas do not all pay the same prices to producers, and in other areas premiums are allowed which result in different prices to producers.

Representing OPS at the meeting were Edwin W. Tiedeman, chief, Dairy Branch; A. J. Nixon, consultant; William A. Wilson, economist; Roger A. LaGuardia, economist; C. W. Smith, head of the fluid milk section; Bernard A. Speer, economist; R. E. Young, Jr., of the Atlanta regional office; Abraham Weinfeld, attorney; W. R. Thomas, Jr., of the Office for Advisory Committees; John J. Murray of the Office of Enforcement, and Samuel Schiccantino, price analyst.

Guy A. Peterson and Herbert Forrest attended as observers for the U. S. Department of Agriculture.

Members of the Committee are:

Wm. C. Welden, H. P. Hood & Sons, Boston, Mass.; W. P. Davis, New England Milk Producers' Assn., Boston, Mass.; T. K. Hamilton, Diamond Milk Products, Inc., Columbus, Ohio; F. H. Kullman, Jr., Bowman Dairy Company, Chicago, Ill.; Raymond Skinner, Forest Hill Dairy, Memphis, Tenn.; T. D. Lewis, Vice President, Adrens Farms Company, Los Angeles, Calif.; L. A. Chapin, Dairy-

A GOOD PROSPECT?

Sure! Ask your driver—chances are, he's tabbed a future "All-American" or two right on his own route. And we hope that both you and your drivers know that these youngsters—active and growing—are top prospects for *Vitamin D milk*, too! To assure you a profitable milk fortification program, we offer—

ARPI Brand Vitamin D Concentrate

General Mills ARPI Brand Vitamin D is a concentrate of uniform potency, extreme blandness and high stability—made especially for milk. The carrier consists *entirely of milk products*—nothing foreign to milk is added. (Easy, inexpensive to incorporate—like adding milk to milk!)

To help you reach persons on low-fat diets with a strong health appeal, General Mills offers—

DANDA Concentrate
(for low-fat milk fortification)

DANDA consists of important Vitamins D and A in pure Grade-A milk products. Purified, distilled Vitamin A and ARPI Vitamin D are incorporated in evaporated milk, packaged into convenient cans, sealed and sterilized. Simply add to milk before pasteurization.

Remember—General Mills concentrates are backed by a name known for *dependability* in the food field. To further assure you of a successful fortification program, General Mills offers a complete line of sales helps and promotion materials at far below the price it would cost you to produce them yourself.

General Mills, Inc.

Special Commodities Division

Mail coupon below today—no obligation

General Mills, Inc., Special Commodities Division
Dept. C, 80 Broad St., New York 4, New York

Please send me free folder and price lists on General Mills' Vitamin Concentrates.

Name _____

Address _____

City _____ State _____

STOELTING

ADVANCED EQUIPMENT

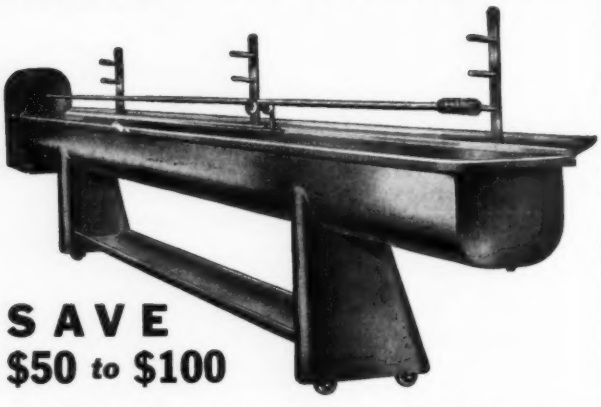
★ *Modern Design*

★ *Finest Stainless Steel Craftsmanship*

★ *Plant Layout and Engineering*

***Compare!* AND CHECK THE EXTRAS YOU GET IN A**

STOELTING
SANITARY PIPE WASHER



SAVE
$50 to $100

Get *all* the extras in a Stoelting Sanitary Pipe Washer *without* extra charge. Check these *included* features before you buy: *Complete* power assembly; covered hood for motor, pump and power assembly; set of four easy-rolling casters for quick portability; sturdy pipe rack; full back apron; broad lower shelf; 1½" sanitary pipe brush — everything you need for fast, thorough, economical pipe washing — backed by Stoelting time-honored craftsmanship for extra years of service. Save time . . . save money . . . get *all* the *extras* in Stoelting . . . by far today's best buy in pipe washers. Make your dollars *do more* and *go farther* with a Stoelting Washer.

For Extra Values and Extra Features Write

STOELTING BROTHERS CO.
Manufacturing Engineers for the Dairy Industries
KIEL • WISCONSIN

men's League Coop. Assn., Inc., New York, N. Y.; Harold H. Kendall, President, Detroit Creamery Company, Detroit, Mich.; Will W. Henry, Dairy Cooperative Assn., Portland, Oregon; Lloyd F. Friend, Secretary, Mid-South Milk Producers Assn., Memphis, Tenn.; Wm. H. Marcussen, The Borden Company, New York, N. Y.; R. B. Bush, Lucerne Milk Company, Oakland, Calif.; Glen Wagner, The Northwestern Cooperative Sales Assn., Inc., Toledo, Ohio; Arthur F. Kerchoff, Pevely Dairy Company, St. Louis, Mo.;

●

DAIRY GUILD SETS UP SHOP

The Dairy Guild of America, with facilities for developing a better understanding of the dairy industry, and to help millions of people to live better and to enjoy better health and to conserve lives, is being organized along a solid front.

The foundation of the Dairy Guild as a permanent organization with executive offices at 111 E. Fourth St., Cincinnati, is being disclosed. Effective and coordinated plans to cooperate with the efforts of many ice cream and dairy product establishments are being set up.

The Guild is an independent and voluntary organization. Its aim is to establish a high standard of uniform excellence in dairy products, and to provide educational means to familiarize the public with the pleasure to be derived from eating ice cream and the health-giving nutritional properties of milk and dairy products.

J. C. McCoy, who has had a long background of experience in the consumer marketing field, and as a specialist on foods, has been designated as managing director of Dairy Guild of America.

McCoy, who accepted this opportunity to direct the Guild, has been associated with marketing, advertising, and consumer research analysis for over 25 years.

He has been the principal in the advertising agency which he headed, and just recently severed his connection with Ruthrauff & Ryan, one of the top-flight agencies in New York. He will now devote his entire time and attention to building up the Dairy Guild of America.

●

DRIVERS SET SAFETY RECORD

Borden Company drivers, operating more than 10,000 vehicles, reduced their vehicle accident frequency rate for the first six months of the year by 4% to make the period the safest on company records, Francis T. McGowan, Borden's safety director, has announced. At the same time, Mr. McGowan reported that the personal injury rate of Borden's 31,000 employes nearly equaled the all-time low set for the first half of 1950.

The six-month vehicle accident rate was 3.53 per 100,000 miles traveled, as compared with 3.69 for the year-ago period. Borden's total mileage for the first half of 1951 increased 7% to more than 54,000,000 miles.

Borden's employes' injury accident rate for the first half of 1951 was 15.67 per million man-hours worked, as compared with 15.64 a year earlier. For the same period, the dairy industry in general showed an increase in frequency of 9%. Borden employes worked more than 43,000,000 man-hours during the January-June period.

CONNECTICUT DAIRY COUNCIL

If the Dairy Industry did not have the support of nutrition authorities it does have, we would not see the increased interest in dairy products so obvious today, according to A. C. Fisher, President of the Connecticut Dairy and Food Council.

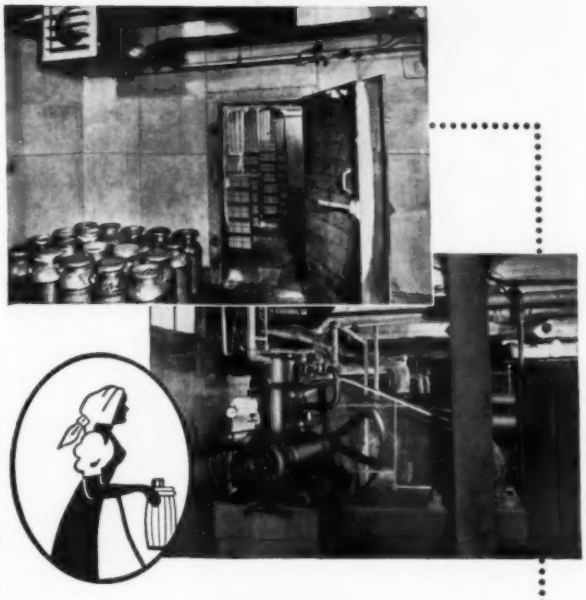
Mr. Fisher, who is Managing Director of Bryant and Chapman, Division of General Ice Cream Corporation, spoke at the 31st Annual Meeting of the Council held recently at the New Haven Country Club. In an oral comparison of milk and its competitive beverages, Mr. Fisher expressed his recognition of the work done by nutritionists everywhere in promoting better public health

Newly elected officers of the Connecticut Dairy and Food Council practicing somewhat of their preaching. Sippers, left to right, are A. C. Fisher, president; E. O. Anderson, treasurer; Stewart Johnson, vice-president, and Ken Geyer, secretary. Mr. Fisher and Mr. Anderson are really giving that milk the business.

through increased use of dairy products. Others speaking at the meeting included Donald Hammerberg, State Milk Administrator, and Miss Marian Arnold, Nutrition Director of the Council.

Business of the meeting, which attracted dairy industry experts from areas throughout the state, included a board meeting and election of officers followed by a dinner meeting. Exhibits illustrating the work of the Council were featured at the meeting as well as displays of those health educational materials regularly distributed by Dairy Council staff nutritionists. General summary was presented outlining the expanding activities of the Council and closely related agencies in the many channels through which consumer educational and dairy publicity efforts are being so effectively directed. Special attention was centered on the increasingly important work toward extending dairy products use in the public diet, carried forward by the nutrition authorities.

Present officers of the Council include: President A. C. Fisher, Managing Director, Bryant and Chapman; Vice-President, Mr. Stewart Johnson, Professor of Agricultural Economics, University of Connecticut; Honorary Vice-President, Mr. Charles G. Morris, retired of New Haven; Secretary, Mr. Ken Geyer, Manager, Connecticut Milk Producers' Association, and Treasurer, Mr. E. O. Anderson, Professor of Dairy Manufacturing, University of Connecticut.



It's VILTER Again—

in the Golden Guernsey Dairy in Milwaukee

● Twenty years ago, in 1931, the Golden Guernsey Dairy Co-operative in Milwaukee bought its first Vilter refrigeration equipment. As Golden Guernsey has expanded, it has continued to specify Vilter when more equipment was needed. Hardly a year goes by without another Vilter addition to their modern, efficient plant.

To Golden Guernsey, Vilter has supplied vertical compressors, shell and tube condensers, liquid receivers, air cooling units, air blast units, supercapacity water coolers, and the Vilter Vertibay Coils in the ice cream hardening room.

Dairies, ice cream plants, and food processors have known for years that they can depend on Vilter. You'll find them re-ordering Vilter, as Golden Guernsey has done, time after time, because they've found that Vilter saves them money in upkeep, in operating costs, and in lack of wasteful "down time."

Vilter

Let your nearest Vilter Representative or distributor show you how you can save with Vilter.

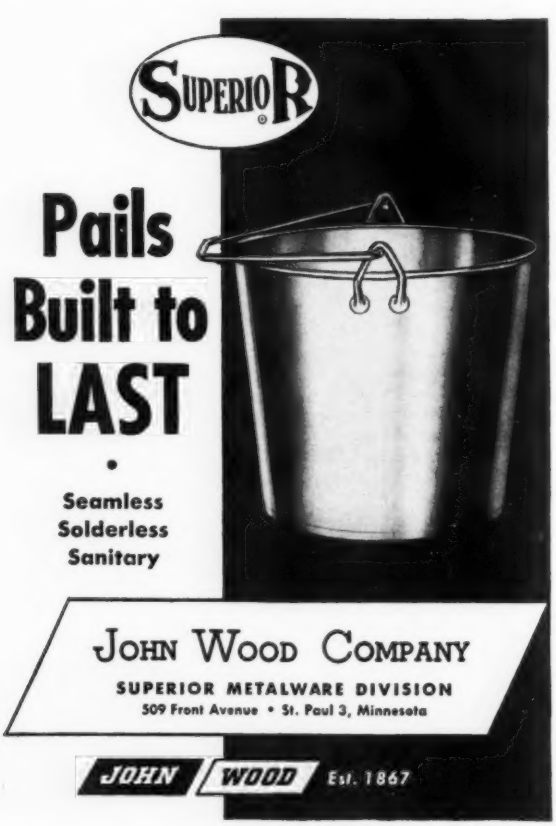
REFRIGERATION and AIR CONDITIONING

THE VILTER MANUFACTURING COMPANY
MILWAUKEE 7, WISCONSIN
Ammonia and Freon Compressors • Pakicers • Evaporative and Shell & Tube Condensers • Pipe Coils • Valves and Fittings • Can Ice Plants

Your purchase of Rogers equipment assures you of the best time-tested Rogers features of construction plus the most modern advances in the production of 3-1 concentrated, evaporated, or condensed milk; whole milk powder or non-fat dry milk solids. Every detail of Rogers design reflects a background of long years of engineering "know-how" and specialized fabricating experience. Write for the Rogers economy-facts now.

"The Choice of Dairyland" Since 1883.. Rogers

C. E. ROGERS COMPANY, 8731 WITT ST., DETROIT 9, MICH.



VERMONT COPS EASTERN JUDGING

Watts of Connecticut Takes First In All Products, Jane Raymond, Green Mountain Girl, Is Second

Paced by comely Jane Raymond, Coach Alec Bradfield's University af Vermont dairy products judging team nosed out the University of Connecticut tasters at the 1951 version of the Eastern States Intercollegiate Dairy Products Judging Contest. With a spot in the top ten of every product judged Miss Raymond bowed only to Connecticut's Dave Watts in the All Products standing. Keeping Miss Raymond company in the predominantly masculine group was Ann Harvey of Ontario, Canada, who gained 13th place in the competition. Runner-up to Vermont was the University of Connecticut with New Hampshire some distance back in third place.

TEAM STANDING IN ALL PRODUCTS

Rank	College	Score
1	University of Vermont	7
2	University of Connecticut	9
3	University of New Hampshire	16
4	University of Rhode Island	18
5	University of Massachusetts	18
6	Cornell University	20
7	Ontario Agricultural College	24

INDIVIDUAL STANDING IN ALL PRODUCTS

Rank	Name	College	Score
1	David E. Watts,	Connecticut	24
2	Jane Raymond,	Vermont	26
3	Robert M. Hamilton,	Massachusetts	27
3	Robert S. Christie,	Connecticut	27
5	Matthew Noonan,	Connecticut	34
6	Edward G. McLoughlin,	Rhode Island	35
6	Larry Cushing,	Vermont	35
8	Benson F. Howard,	New Hampshire	36
8	Michael Sofokles,	Vermont	36
10	Douglas B. Emmons,	Ontario	37

TEAM STANDING IN BUTTER

Rank	College	Score
1	University of Vermont	72.01
2	University of Massachusetts	73.67
3	University of Rhode Island	78.00
4	University of Connecticut	83.50
5	Cornell University	85.84
6	University of New Hampshire	87.67
7	Ontario Agricultural College	109.00

INDIVIDUAL STANDING IN BUTTER

Rank	Name	College	Score
1	Robert M. Hamilton,	Massachusetts	18.50
2	Jane Raymond,	Vermont	19.50
3	Gordon R. Trott,	Massachusetts	22.00
4	George N. Sarantos,	Rhode Island	24.00
5	Robert S. Christie,	Connecticut	24.50
6	Michael Sofokles,	Vermont	25.34
7	George M. Kloser,	Cornell	25.67
8	Edward G. McLoughlin,	Rhode Island	27.00
8	George W. Madison,	Rhode Island	27.00
10	Larry Cushing,	Vermont	27.17

TEAM STANDING IN CHEESE

Rank	College	Score
1	Cornell University	109.87
2	University of Connecticut	112.52
3	University of Vermont	117.32
4	University of New Hampshire	135.18
5	University of Rhode Island	138.34
6	University of Massachusetts	138.85
7	Ontario Agricultural College	139.21

INDIVIDUAL STANDING IN CHEESE

Rank	Name	College	Grade
1	David E. Watts,	Connecticut	31.34
2	George M. Kloser,	Cornell	31.67
3	Douglas B. Emmons,	Ontario	32.47
4	Robert M. Hamilton,	Massachusetts	33.01
5	Rodfigo J. Montrealegre,	Cornell	35.77
6	Thomas J. Hahn,	New Hampshire	35.84
7	Jane Raymond,	Vermont	36.67
8	Matthew Noonan,	Connecticut	38.34
9	Edward G. McLoughlin,	Rhode Island	39.67
10	Micheal Sofokles,	Vermont	39.81

TEAM STANDING IN MILK

Rank	College	Score
1	University of Vermont	60.09
2	University of Connecticut	65.73
3	University of New Hampshire	68.85
4	Ontario Agricultural College	69.32
5	University of Rhode Island	69.75
6	University of Massachusetts	74.00
7	Cornell University	100.84

INDIVIDUAL STANDING IN MILK

Rank	Name	College	Score
1	Benson F. Howard,	New Hampshire	13.67

Vermont's winning combination was, left to right, Larry Cushing, Jane Raymond, Michael Sofokles, and Coach Alec Bradfield.

Rank	Name	College	Score
2	Michael Sofokles,	Vermont	17.92
3	George N. Sarantos,	Rhode Island	19.00
4	Larry Cushing,	Vermont	19.67
5	Ann Harvey,	Ontario	20.50
6	David E. Watts,	Connecticut	21.26
7	Robert S. Christie,	Connecticut	21.50
7	Edward G. McLoughlin,	Rhode Island	21.50
9	Robert M. Hamilton,	Massachusetts	22.00
10	Jane Raymond	Vermont	22.50

TEAM STANDING IN ICE CREAM

Rank	College	Score
1	University of Connecticut	107.51
2	University of Vermont	132.51
3	University of New Hampshire	132.68
4	University of Massachusetts	133.17
5	University of Rhode Island	134.50
6	Ontario Agricultural College	135.17
7	Cornell University	143.93

INDIVIDUAL STANDING IN ICE CREAM

Rank	Name	College	Score
1	David E. Watts,	Connecticut	32.84
2	Robert S. Christie,	Connecticut	36.50
3	Douglas B. Emmons,	Ontario	38.00
4	Matthew Noonan,	Connecticut	38.17
5	Mark R. Perry,	New Hampshire	40.17
6	Ann Harvey,	Ontario	40.50
7	Jane Raymond,	Vermont	41.00
8	Benson F. Howard,	New Hampshire	41.17
9	Fred Williams,	Massachusetts	42.50
10	Larry Cushing,	Vermont	42.51

●

TWO QUART CONTAINER IN CHICAGO

A review of the recent changes in the amount of fluid milk sold in each size of container indicates that some pronounced shifts have taken place. These changes have been towards a greater use of multiple-quart containers and less use of the one-quart containers.

As recently as 1949, the quantity of fluid milk sold in one-quart containers was five times the amount sold in one-gallon containers. In a period of two years this ratio has been decreased to two to one. This shift to larger containers is also clearly brought out in the case of half-gallon containers. The data for 1949 shows that at that time there was 2.3 times as much milk sold in quarts as in half-gallons. At the present time an equal amount of fluid milk is sold in half-gallon containers and in one-quart containers.

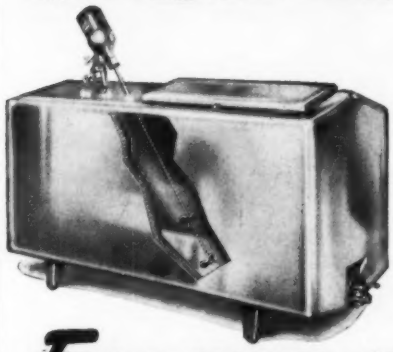
These changes are based on sales during the month of April for each of the past several years.

There has been little change shown for small containers (pints or less), but the major shift has been toward less milk sold in quarts and greater amounts sold in one-gallon and half-gallon packages. The one-quart container which has traditionally been the "standard" container in the fluid milk industry presently represents only a little more than one-third of the fluid milk sold by Order 41 handlers.

CATTARAUGUS

Home of Jack the Giant-Killer!

Back in the days of hoop skirts and silk tile hats, PURITY quality equipment commenced to pour from the little rock-ribbed community shown herewith. Up-to-date equipment and methods today, but old-fashioned honesty still prevails.



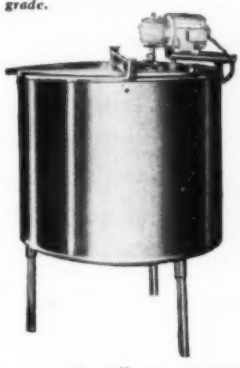
Bacillus tuberculosis —giant among milk-borne diseases. . . . PURITY slaughters 'em.

PURITY Solid Stainless Steel Round-Corner Rectangular Storage Tank is a beauty. Skillfully engineered battleship construction and rapid, thorough agitation.

FROM COW TO CUSTOMER

IN these days of keen milk plant competition, it's a fact that the quality of your finished milk product is nothing less than the sum-total of processing steps all-along-down-the-line. If you're seeking the favor of that hard-to-please connoisseur, Mrs. Housewife, then a PURITY Solid Stainless Steel Storage Vat or Ice Cream Flavor Mix Tank, like those shown herewith, may be just as important to you as any other part of your plant equipment.

PURITY Ice Cream Flavor Mix Tank; speedy, sturdy, sanitary and efficient. Assures a steady flow of unvarying flavor and grade.



PURITY Milk Processing Equipment is built to give perfect handling all the way from Cow to Customer. Years of successful manufacturing background, and thousands of pleased customers to recommend it. It's surely something to tie to; and you can buy it with your eyes shut, as a lot of other milk plants are doing, and be right-side-up-with-care every time — *just try it, and see!*

It will pay you to investigate before you buy— write for bulletins of the complete PURITY Line.

PURITY

Manufacturing Company, Inc.

MILK HANDLING MACHINERY & EQUIPMENT

Oakes & Burger, Inc., Sole Distributors

CATTARAUGUS, N. Y., U. S. A.

EST. 1873 Over seventy-five years of honest equipment

VISIBLE CONTROL
EASY TO USE
NO WASTE

DETERGENT BRICK FEEDER AND DETERGENT BRICKS

Klenzade Acid Detergent Brick No. 3 alternated with Klenzade Alkaline Detergent Brick No. 4 insures positive control through the alternate system of cleaning. This is the scientific answer to sparkling film-free milk cans. Direct visible control Klenzade Feeder plus finely balanced Klenzade Detergent Bricks offers amazing results in the control of lime deposits and milkstone.

Write to Klenzade Products, Inc., Beloit, Wisconsin for all the facts on better can washing methods.

Jobbers and Distributors In Principal Cities

KLENZADE

KLENZADE PRODUCTS, Inc.
BELOIT, WISCONSIN

TEXAS CALLS IT MELLORINE

Sound Approach to Vegetable Fat Competition Shown In Lone Star State Ruling On Frozen Dessert

Austin, Texas—In an effort to solve a problem bothersome to the Texas ice cream industry, the State Health Department has promulgated a definite legal line between vegetable fat frozen dessert and ice cream.

Under terms of the order, after October 1 all frozen desserts sold in Texas made with vegetable or other edible fats must be called "mellorine."

The order prohibits use of the word "cream" or its phonetic equivalents in describing any vegetable fat frozen food product.

The order was issued under the signature of Texas' State Health Officer George W. Cox at the request of the ice cream manufacturers of the state, virtually all of whom are members of the Dairy Products Institute of Texas.

The Dairy Products Institute instituted proceedings that led to the issuance of the health department order.

For the past six months the Texas ice cream industry conducted studies, hearings and experiments in developing standards for this product (mellorine) and after assembling all the data made recommendations to the State Health Officer. The industry's action was taken in cooperation with technical experts from Texas A. & M. College, Texas Tech, the State Health Department and ice cream technicians.

The ice cream industry and vegetable fat product manufacturers—after a long study—coined the name "mellorine" as a good descriptive word for the vegetable oil frozen dessert. It was selected for its sound, its easy pronunciation and its descriptive value.

Wide publicity throughout the state is being given to the health department order by the Dairy Products Institute of Texas.

Clear Cut Choice

George M. Clarke, executive vice-president of the institute, said the publicity is stressing the fact that the ice cream eating public will now have a clear-cut choice between butterfat ice cream and the vegetable fat product.

The educational campaign took advantage of Texas' cotton position by pointing out that "to cotton-conscious Texas, this will mean another technical and commercial achievement in the use of vegetable oils." Texas is the biggest cotton (and cottonseed) producing state in the nation. It is sixth nationally in ice cream sales.

"The issue has been met squarely, realistically and in the best interest of the Texas industry and consumer," Mr. Clarke said after Dr. Cox issued the order.

"We believe the order is important in Texas ice cream history, because the public is now given a clear cut choice, at a price it chooses to pay, and with the assurance that it is receiving what the product asked for."

The full text of Dr. Cox's order, issued September 11, is as follows:

"TO WHOM THIS MAY CONCERN:

"By authority vested in the State Health Officer by Article 4465A and 4466 to make, publish, and enforce

rules consistent with this law and adopt standards for foods, food products, beverages, drugs, etc., I hereby make and adopt the following definition and standard for Mellorine:

'MELLORINE

'"Mellorine" is a frozen or unfrozen product made from edible fat, milk solids, and sugar, with or without a natural flavoring, and contains not less than 6 percent edible fat and not less than 30 percent of all solids including fats, and may contain not more than 1 percent of a stabilizer approved by State Health Officer; and may contain one or more of the following optional ingredients: eggs, fruit, salt, nuts, extracts, harmless coloring, chocolate or cocoa, and sucrose, dextrose, frutose and any other sweetner approved by State Health Officer.

'Use of the word "cream," or its phonetic equivalent, however spelled, in connection with the labeling, advertising, branding, or sale of this product is prohibited by Article 708 Penal Code of Texas.

'The manufacture of Mellorine shall meet the same rules and regulations that govern the production and manufacturing of ice cream and other manufactured milk products (as promulgated by State Health Department, January 1, 1946).'

●

PLAN NDC WINTER CONFERENCE

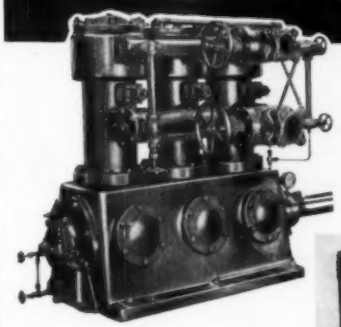
Plans for the 1952 Annual Meeting-Winter Conference of the National Dairy Council at Syracuse, N. Y., January 28-30, inclusive, are being developed with emphasis on a program of timely interest to the entire dairy industry. The three-day sessions will be held at the Hotel Syracuse.

Co-chairmen in charge of planning the program are Milton Hult, President of the National Dairy Council, and R. L. Hicks, President of the Board of Directors, Dairy Council of Syracuse. The latter affiliated Dairy Council unit will be host to this event.

A committee of the National Dairy Council Board of Directors is assisting NDC in developing the program. This committee is composed of Leslie C. Mapp, General Manager-Treasurer, Miami Valley Milk Producers Association, Dayton, Ohio; O. R. Thompson, President, Rib Lake Dairy Company Co-operative, Medford, Wis., and G. V. Rector, Vice-President, Fairmont Foods Company, Omaha, Neb.

Chairmen of local committees assisting the Dairy Council of Syracuse with arrangements for the meeting are: Finance, A. M. Amidon, Fairbanks Farm Dairy, Inc., Syracuse; attendance, Curtiss C. Brown, Netherlands Dairy Co., Syracuse; publicity, Linn C. Beebe, Dairymen's League, Syracuse; milk bar and hospitality, Walter Nellis, Golden Guernsey Dairy, Syracuse; banquet, Daniel Gates, Homestead Farms, Chittenango, N. Y.; welcome and mixer, Frank Brothers, Skaneateles, N. Y., and hospitality, Stanley Murphy, Tully, N. Y.

HOWE
SPECIAL TESTS
insure Special performance!



Below—Piston assembly and suction valve cage

Left—Connecting rod, bearing, and piston pin.

You Can Depend On Howe Compressors!

The surfaces of all moving parts, and other surfaces subject to wear . . . crankshaft, cylinder walls, pistons, valves, valve seats . . . are ground by Howe's specially designed grinders which insure finely finished and true surfaces. No valve leakage! Every Howe compressor is factory tested and carefully checked for bearing load normal for average conditions, for correct tolerances, and for wear. All parts of Howe Compressors are interchangeable. Units, while handled individually as if custom made, are the same dimensionally and uniform in production. Out of long experience Howe builds compressors of superior quality, with the advantage of interchangeable parts!

Round the world, refrigeration equipment users are cutting installation, maintenance and operating costs, with field-proved Howe Equipment. Maintains that precise temperature and humidity control . . . achieved through 39 years of specialization . . . which keeps your products at high-profit perfection. Without obligation, consult Howe engineers on all your refrigeration problems!

Since 1912 manufacturers of ammonia compressors, condensers, coolers, fin coils, locker freezing units, air conditioning (cooling) equipment.

HOWE ICE MACHINE CO.
2815 Montrose Avenue Chicago 18, Illinois
Distributors in Principal Cities—Cable Address: HIMCO, Chicago
Write for details about available distributor territories. Your inquiry invited.

Roberts Everett, Executive Vice-president of Dairy Industries Supply Association, presenting the award to the All Products Team winners from Mississippi State College. Holding the cup is Coach F. H. Herzer, and on his left are Lawrence D. Custer, Kelly Springs, Mississippi; Robert A. Brooks, Starkville, Mississippi; and Claude J. Blackburn, Booneville, Mississippi.

Mississippi State Wins All - Products in Student Judging

Connecticut, Iowa Capture Second and Third Places in Annual Collegiate Contest—Christensen of Iowa Top Individual—Competition Keen

By NORMAN MYRICK

PACED by gallant Claude Blackburn, Mississippi State College swept to victory in the thirtieth running of the Collegiate Students' International Contest In Judging Dairy Products. With a fourth, seventh, and ninth in the All Products class Coach Fred Herzer's tasters vindicated their choice as favorites.

A scant sniff behind Mississippi was Connecticut's aggregation of Christie, Watts, and Lockwood. Bob Christie's second in All Products and Dave Watts' third in the same category made Connecticut the toughest kind of competition. Except for a relapse in judging milk Connecticut was headed straight for the bacon.

Iowa State, making its usual strong bid, captured a first in Butter and a first in Cheese, but failed to place team-wise in either milk or ice cream. Although Austin Christensen grabbed off a sixth place in ice cream for Iowa, their failure to score decisively in either of these products was enough to upset the butter tub. The tall corn boys got under the wire for third just a gargle ahead of Maryland. Actually the final score showed a tie between Maryland and Iowa. The tie was broken by the judges in favor of the gentlemen from Ames.

Big surprise of the contest was the surge by Maryland into fourth place and the superb showing of Georgia that carried the cotton country boys into fifth place. Maryland's Simms Jacquette turned in a sturdy performance to win second place in Milk while his teammates Dick Bassette and M. A. Rysavy banged out a score in cheese and ice cream respectively.

Individual performance honors were captured by Iowa State's Austin Christensen who had a fourth in Butter and a first in Cheese. Breathing down his neck all the way were a pair of real top flight taste-bud carriers from Connecticut. Bob Christie of the Uconns pilfered second place, while his running mate Dave Watts took third. Most amazing of the individual performances was turned in by the Iowa contingent in Cheese. Led by Austin Christensen, the Iowa boys took the first three places in this class.

HOW WE PICKED THEM

All Products

1. Mississippi State College
2. Iowa State College
3. University of Connecticut

HOW THEY FINISHED

1. Mississippi State College
2. University of Connecticut
3. Iowa State College

(OUR MODESTY FORBIDS BOUQUETS)

With an enthusiastic bellow that reverberated out of the confines of Detroit's Book-Cadillac Hotel all the way to the Rio Grande, the patrons of Texas A. & M. greeted the announcement that their exponents of the flavor art, S. R. Allen and T. M. Huston, had taken first and third in ice cream. That was Texas' finest hour at the contest and they made the most of it.

Michigan got in its one telling lick in milk. Al Hosner wrapped up a gold medal for his Alma Mater in that product while Simms Jacquette of Maryland and Rodrigo Montealegre of Cornel staked out a claim on second and third positions.

Run with its usual efficiency, the contest involved 23 teams on the floor. Clemson College and Ontario were forced to cancel out at the last moment, and Pennsylvania failed to put a team in the lists.

The annual banquet, held in the Book-Cadillac Hotel, was a vast improvement over the talkathons of other years. Whittled down to its basic function, which is to recognize the winners in this unique and valuable contest, the awards dinner was a suit-

Michigan State College's Milk Class winner, Albert W. Hosner, receiving his crown from America's Butter Queen, Miss June Bostrom.

able climax to a splendid event. Outside of the introductory arrangements which could have stood something in the way of polish and drama, and the paper crowns placed on the heads of the individual winners—even though placed there by lovely June Bostrom, the American Butter Institute's Butter Queen—the Awards Banquet was a sparkling honor to some exquisite performances.

Following is the standing of the first eight in the various events:

ALL-PRODUCTS TEAMS

1. Mississippi State College
2. University of Connecticut
*3. Iowa State College
*4. University of Maryland
5. University of Georgia
6t. Cornell University
6t. Ohio State University
8. Michigan State College

*Tied for third place. Tie broken in favor of Iowa State College with a grade of 279.11 compared with 301.81 for Maryland.

ALL PRODUCTS
Individuals

1. Austin A. Christensen, Iowa State College
2. Robert J. Christie, University of Connecticut
3. David E. Watts, University of Connecticut
4. Claude J. Blackburn, Mississippi State College
5. Bruce H. Collins, Ohio State University
6. Richard Bassette, University of Maryland
7. Lawrence D. Custer, Mississippi State College
8. Albert W. Hosner, Michigan State College

BUTTER TEAMS

1. Iowa State University	40.50
*2. Mississippi State College	54.67
*3. University of Connecticut	54.67
4. Michigan State College	56.01
5. Ohio State University	56.67
6. University of Nebraska	59.50
7t. University of Minnesota	60.50
7t. University of Tennessee	60.50

*Ties broken on basis of flavor score.

BUTTER
Individuals

1. William F. Krueger, Michigan State	12.34
*2. Calvin Bolton, Iowa State College	13.00
*3. Bruce H. Collins, Ohio State	13.00
4. Austin A. Christensen, Iowa State	13.50
5. Delmar L. Andersen, Iowa State College	14.00
*6. Robert J. Christie, University of Conn.	14.50
*7. Bill Kemp, University of Tennessee	14.50
*8. Claude J. Blackburn, Mississippi State	15.00

*Ties broken on basis of flavor score.

CHEESE TEAMS

1. Iowa State University	58.35
2. University of Connecticut	64.37
3. University of Maryland	74.58
4. Mississippi State College	77.86
5. Oklahoma A. & M. College	80.41
6. University of Georgia	80.90
7. University of Massachusetts	81.75
8. State College of Washington	82.74

CHEESE
Individuals

1. Austin A. Christensen, Iowa State	17.17
2. Calvin Bolton, Iowa State College	18.01
3. Delmar L. Andersen, Iowa State	20.67
4. Robert E. Lockwood, University of Conn.	21.00
5. David E. Watts, University of Conn.	21.01
6. Allen Wood, State College of Wash.	21.17
7. Robert J. Christie, University of Conn.	22.36
8. Richard Bassette, University of Md.	22.52

MILK TEAMS

1. Mississippi State College	69.68
2. Cornell University	70.83
3. Ohio State University	71.53
4. Iowa State University	75.25
5. University of Wisconsin	78.17
6. State College of Washington	78.79
7. University of Maryland	79.20
8. Michigan State College	79.36

MILK
Individuals

1. Albert W. Hosner, Michigan State	18.60
2. Simns Jacquette, University of Md.	19.77
3. Rodrigo Montealegre, Cornell University	20.48
4. Robert J. Christie, University of Conn.	21.42
5. Claude J. Blackburn, Mississippi State	21.63
6. Hartl R. Jones, Ohio State University	21.83
7. Fred Williams, University of Mass.	22.26
8. Frank Whigham, University of Georgia	22.50

ICE CREAM TEAMS

1. Cornell University	72.85
2. University of Connecticut	75.52
3. A & M College of Texas	76.86
4. University of Maryland	82.36
5. Mississippi State College	82.68
6. Michigan State College	83.52
7. University of Georgia	87.01
8. University of Tennessee	87.09

ICE CREAM
Individuals

1. S. R. Allen, A & M College of Texas	19.68
2. David E. Watts, University of Conn.	21.67
3. T. M. Huston, A & M College of Texas	23.01
4. William G. Hoffmann, Cornell University	23.84
5. M. A. Rysavy, University of Maryland	24.01
6. Austin A. Christensen, Iowa State	24.17
7. George M. Kloser, Cornell University	24.34
*8. Robert Hicks, Texas Technological Col.	24.50

*Ties broken on basis of flavor.

Hy-Vitamin B1
Stillicious
CHOCOLATE SYRUP
★
CHOCOLATE PRODUCTS CO.
415 West Scott Street
Chicago 10
741 Kohler Street
Los Angeles 20
For over 28 years, Stillicious has been one of the consistently best products in the industry. In today's super-competitive market, alert dairies who want the sustained customer appeal of uniform quality and superbly balanced flavor, are looking to Stillicious as never before.
★ IT TAKES THE BEST TO MAKE THE BEST ★ IT TAKES THE BEST TO MAKE THE BEST ★ IT TAKES THE BEST TO MAKE THE BEST ★ IT TAKES THE BEST TO MAKE THE BEST ★

MIF Annual Convention Adopts Vigorous Protest Against S. R. 63

Joint Session Hears Magnificent Story of Moral Rearmament—Department of Justice Scolded, OPS Castigated, Brannan Unharmed

By NORMAN MYRICK

IN A SHARPLY worded resolution the Milk Industry Foundation registered its disapproval of the Office of Price Stabilization's Supplementary Regulation 63. The action, taken at the Foundation's annual convention held at Detroit October 24, 25, 26, authorized the Board of Directors of the Milk Industry Foundation to carry the protest to the Office of Price Stabilization, the National Defense Administration, and members of Congress.

The convention, held at Detroit's Statler Hotel, attracted milk handlers from the corners of the nation. Opening with a full head of steam in a joint session with the International Association of Ice Cream Manufacturers, the meeting never let the gauge fall until adjournment Friday afternoon.

Principal business transacted by the membership, in addition to the resolution on S. R. 63, was the election of officers. Replacing T. Kline Hamilton, Diamond Milk Company of Columbus, Ohio, as president of the Milk Industry Foundation is T. D. Lewis of Arden Farms, Los Angeles. Dr. Bruce Baldwin, Abbotts Dairies, Philadelphia, takes over as vice-president, and E. J. Mather, National Dairy Products Company of Washington, D. C. goes into the treasurer's chain. New directors elected are P. A. Reinhold, Foremost Dairies, Inc., Jacksonville, Florida; John Simpson, Superior Dairies, Austin, Texas; True C. Adams, IXL Creamery Co., Colorado Springs, Colorado; Hubert Garrecht, Klink Brothers Dairy, Memphis, Tennessee; and J. O. Eastlack, The Borden Co., New York, N. Y.

The convention program was divided up into interest sections. These sections included Plant, Laboratory, Accounting, Sales, Motor Vehicles, and Milk Supplies.

Main convention feature was the joint session with the ice cream people during Wednesday, October 24. Firing the first piece was retiring President T. Kline Hamilton, who did his usual masterly job telling the milk industry that there is always a better way. Substance of Mr. Hamilton's thesis is that progress comes about only when men are willing to examine their activities and themselves in the light of honest criticism.

H. F. Judkins, National Dairy Products Company, Inc., of New York followed Mr. Hamilton, and gave some zing to a technical discussion of quality. Mr. Judkins was concerned with what happens to products after they leave the plant, particularly their shelf life in the stores and the treatment they receive in the home. He urged his listeners to encourage better merchandising practices among their distributors in order that a more equitable treatment may be given dairy products from the standpoint of time. He said that surveys had shown some dairy products staying on the shelf for two or three months due to faulty merchandising. New shipments were constantly pushing relatively old merchandise into the background. He called attention to the article by Dr. G. M. Trout, Care of Milk In The Home, that was published in the June 1951 issue of the "American Milk Review."

By far the outstanding feature of the joint session was the story told by labor relations men, union leaders, and regular pilots on United and Eastern Airlines concerning their solution to labor difficulties. These men had come into contact with a movement known as Moral Rearmament. The convention settled back as comfortably as it could and got itself ready for a good sleep when the speaker was introduced. Who let this character in? was the silent question that skipped through a couple of thousand drowsy minds.

The trend toward oblivion came to a sharp halt as the speaker, whose name is Twitchell, laid the foundation for one of the most amazing tales that the Milk Industry Foundation ever listened to. What the speaker said and what subsequent contributors to the same topic said, was simply that when people act like men who believe in the great tenets of Christian living, a solution to their problems is not hard to find. It sounds a bit corny to write it. It sounds unbelievable when one talks about it. Nevertheless, there it was, five men, four of them tough, hard-fisted veterans of the airline business, taking their hair down in public, talking about the great light that came into their lives when they started operating on the basis not of who is right, but what is right.

There was J. H. Brock, Vice-president in Charge of Industrial Relations, for Eastern Airlines. There was Edgar H. Chambers, a practical labor leader who is General Chairman of District 100, International Association of Machinists. There was a pilot and a labor relations man from United Airlines. They all told the same story. How labor and management had been fighting, bickering, jockeying, scheming in a deepening morass of deteriorating industrial relations. How, under pressure, one of them was exposed to the ideas inherent in the program that is known as Moral Rearmament. How this man brought the word back to others and how the stupendous magnificence of honor and courage and truth swept through their ranks from top executives down to janitors.

United Airlines was about finished a few months ago. It is a matter of record. The Civil Aeronautics Commission was about to put the company out of business so badly had its relationship with its pilots and its other employees become. Nothing has changed. Not a single plane or a single air strip or a single control tower. The only thing that has changed has been a manner of thinking. As a result United is back in business. Chambers, the union man, told how he had used every trick, every angle, every lever in his varied bag of negotiating tricks. He told of the suspicion, the ill will, the distrust that filled the atmosphere in which he worked. He told, also, of the great far horizons that had opened up when he got it through his head that the way to do business was on the basis of what was right rather than who was right. He told it with a pride that belongs only to strong men. He told it, and the others told it, so that a great longing strugged with disbelief in the hearts of his listeners. They did not preach, they merely told what had happened to them. And on the faces of two thousand men was the poignant yearning for the splendor which the speakers described. They had seen that morning, those ice cream men and those milk men, the practical realization of a goal toward which men have struggled for ten thousand years.

The afternoon of the joint session was given over to alternate castigations and explanations of the present administration in Washington. Secretary of Agriculture Brannan, who, in spite of many unkind things people have said, is a very good man, talked for about three quarters of an hour and said nothing worth recording. Colonel H. A. Toulmin, a lawyer from Dayton, Ohio built up a devastating case against the Department of Justice. His argument was that in many instances of anti-trust prosecutions, the Department is acting contrary to the Constitution. Willis F. Daniels, of Harrisburg, Pennsylvania, gave the back of his hand and the bottom of his lungs to the Office of Price Stabilization and S. R. 63. Gist of Mr. Daniels talk was that under S. R. 63 milk dealers will be out of business "as soon as the present pasteurizers wear out". It was quite a speech but the walls of the Hotel Statler took it all right.

S. R. 63 certainly was the topic of the hour. This is what the Milk Industry Foundation had to say about it:

WHEREAS, the price of fresh milk whether purchased by the public at the home or from stores has risen much less percentagewise than have prices generally, or the price of any other substantial item in the cost of living. In August, 1951 on a comparable basis, the retail price of milk stood at an index of 185, as compared to all foods at 228, the general price level at 221, and per-capita consumer purchasing power at 284.

The fresh milk industry in many markets is already confronted with serious price squeezes. Price squeezes will inevitably arise in many more markets because of the very job that the industry has done in keeping prices down in the period prior to the present price freeze as promulgated last January by the Office of Price Stabilization under the National De-

(Please turn to Page 67)

BARKER
"NUNESTYLE"
PAPER BOTTLE CASES
Extra Features at No Extra Cost
The Case of Perfection
WITH THE NEW, ORIGINAL
SELF-STACKING BOTTOM
"Hairpin Turn" Side Wires ★ No Sharp Edges
Today's finest plus-value wire case with a score of exclusive Barker features. No sharp edges to scratch or mar paraffin. No clipped wire ends. All smooth hairpin turns add strength, long life, attractive appearance. Depressed handle for truck claw. And star of them all: Barker Self-Stacking Bottom . . . a rugged, heavy, solid all-round bar that "nests" easily, quickly, safely. "Slides" into stacking position; higher stacks. "Glides" on conveyors, roughest floors, trucks; easier handling, practically wear-proof. Three won't-sag, heavy FLAT wires under each carton. NuNESTyle stacks securely with standard wood cases. Get all these features . . . and more . . . in Barker NuNESTyle . . . the case of perfection. Ask your jobber or write for details.
For A Better Buy . . . Buy Barker
EASY SECURE STACKING
BARKER EQUIPMENT COMPANY
Largest Exclusive Manufacturers of Wire Cases
1151 SEVENTH ST.
KEOSAUQUA, IOWA

S. R. 63

(Continued from Page 34)

long amendments. The Capehart amendment to the Defense Production Act allows all costs up to July 26, 1951, to be included in calculating ceiling prices. S. R. 63 specifically allows only about 85% of the costs of purchasing, processing, and distributing fluid milk. The Herlong amendment provides for customary margins for certain classes of sales which would include retail sales. The fluid milk industry under S. R. 63 is denied its customary margins.

It is an expression of bitter disillusionment for the editor of the "American Milk Review" to write these words. We have held that the United States and its allies in the free world are engaged in a relentless war against the archaic evils represented by the philosophy and conduct of Soviet Russia. We have held that the main battle ground of this war is in the minds of men. Gigantic forces are abroad that will influence the way in which men think and consequently they will influence the course of the war. One of these forces is inflation, a particularly insidious evil that can accomplish the destruction of our lives and our liberties and our pursuit of happiness without the firing of a shot. We have held, therefore, that price control legislation, specifically Public Law 774, was a weapon of war and should be so regarded by the fluid milk industry and by the nation. When, however, we see this weapon used as an instrument for political conquest, when we see its great potential perverted in the interests of social reform our only recourse is to attack the prostitution of a great hope with all the resources at our command. It may be that S. R. 63 is something with which the Fluid Milk Industry can live. It may be that its provisions are not insufferable. Time will tell. But even if S. R. 63 is not insufferable, the great basic criticism remains. The 15% of the total costs of purchasing, processing and distributing milk which the industry has been forbidden to use in computing ceiling prices has been forbidden, not because of conditions dictated by the course of battle but by political expediency and the activities of professional reformers.

Give Them Good Weapons

We do not believe that the men of the milk industry are any more patriotic or any less patriotic than other segments of American industry. We do believe that in general they are aware of the mighty conflict that has engulfed the world. We believe that they are ready; anxious to their part in bringing victory to our arms. But we also believe that if the instruments with which they are armed are defective, if their confidence in these charged with the responsibility of conducting the war on inflation is impaired then their effectiveness in the struggle is seriously reduced. S. R. 63 should be altered so that the realities of costs as translated into ceiling prices are recognized as provided in the Capehart and Herlong amendments. It should also be altered so that speed and practical logic are applied to the evolution of the price ceiling so that costs and prices which are legal in other segments of the economy become legal in the milk industry. This is no time for political fishers to cast their lines on troubled waters. This is war.

THE NEW Kendall RETURNLINE CAN WASHER

Check THESE FEATURES

★ Partition separates cleaning from sterilizing stations.

★ Saves costly space.

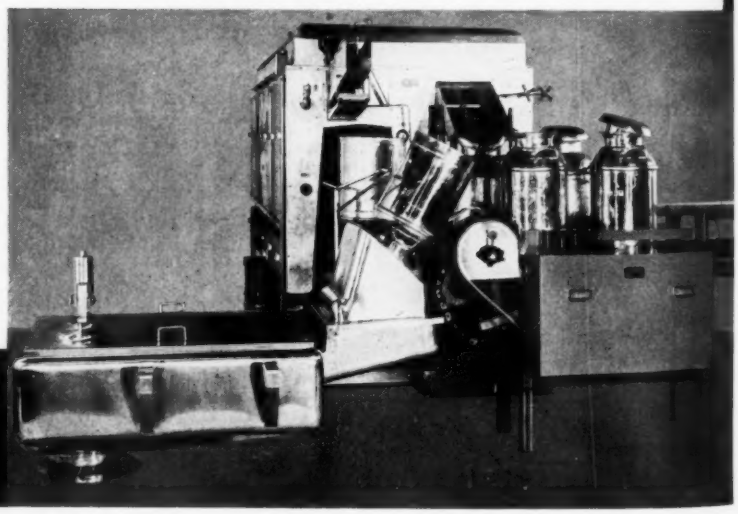
★ Provides maximum visual inspection for incoming AND outgoing cans.

★ Eliminates necessity for separate reject conveyor.

★ Completely accessible for cleaning and adjusting.

★ All controls within easy reach.

FEATURING A 150° DUMPING ARRANGEMENT



KENDALL-LAMAR CORPORATION
POTSDAM, NEW YORK

MIF ANNUAL CONVENTION

(Continued from Page 65)

fense Production Act of 1950. In this Act, and as it was amended in 1951, Congress clearly expressed the mandate that the price ceiling for milk processors and distributors shall reflect their pre-Korea prices, plus *all* subsequent cost increases, and that the price ceilings of this industry shall reflect its pre-Korea percentage margins over material costs, and that all price ceilings shall reflect fair and equitable margins.

The Office of Price Stabilization has already accorded to many industries the right to adjust ceiling prices of their products based on cost increases of labor and other categories of direct cost. The Office of Price Stabilization has denied this right to our industry, but has instead in Supplementary Regulation 63 set up a time-consuming procedure of petition and determination.

Contrary to the clear mandate of Congress, Supplementary Regulation 63 incorporates only a limited recognition of the cost factors incurred in the fresh milk industry, and imposes a heavy burden of cost absorption as to many of the necessary and unavoidable costs of the industry.

The theory of cost absorption through volume increases as applied to our industry, is distinctly erroneous. Volume increases in the fluid milk industry occur but slowly and to but a very unimportant degree. The cost structure of the industry is such that these limited volume increases provide but a most minute area for cost absorption.

There is already substantial evidence that relief petitioned for under Supplementary Regulation 63 will be extremely time consuming. Cost absorption even as to the cost elements which have been recognized in S. R. 63, will be and is being thrust upon the industry through the sheer delay in obtaining determinations under the burdensome procedure set up in the regulation.

NOW THEREFORE, be it resolved that the members of the Milk Industry Foundation assembled in this annual convention protest vigorously the present handling of ceiling prices for this industry by the Office of Price Stabilization, and they protest further the indirect cost absorption thrust upon the industry by Supplementary Regulation 63; and they protest further the already evident delays involved in obtaining relief from price squeezes under the procedures set forth in this regulation.

AND BE IT FURTHER RESOLVED that this membership expressly charge the Board of Directors of the Milk Industry Foundation to register these protests with the Office of Price Stabilization and with the National Defense Administration, and with the appropriate Committees and members of Congress; and to take such further action as may be necessary to protect this industry; and be it further resolved that the appropriate members of Congress be advised of the discriminatory treatment thus accorded to the Fresh Milk Industry, and that these members of Congress be urged to correct immediately this miscarriage of justice and of law—which has been and is resulting in reducing earnings to the vanishing point in this, one of America's most essential industries, in direct disregard of the clear mandate of Congress as expressed in the National Defense Act.

GET EXTRA HOLDING SPACE AT YOUR PLANT...

with STURDY-BUILT REFRIGERATED STORAGE DEPOTS

STURDY-BUILT HIGH OR LOW TEMPERATURE REFRIGERATED STORAGE DEPOTS GIVE YOU . . .

QUALITY CONSTRUCTION

Finest materials, finest workmanship. Built entirely under one roof for quality control of every detail. Thoroughly test run before shipment.

LOW PRICES

Low first cost, low maintenance cost make Sturdy-Built depots pay for themselves quickly in use.

You can have that extra holding space you need at low cost. No worries about building restrictions. No on-site assembling or construction. Sturdy-Built refrigerated depots are complete, all-in-one units . . . shipped ready to use. Easily moved. Speed loading. Write today for complete information on low cost holding space for your plant.

STURDY-BUILT

F. B. DICKINSON & CO.
Highland Park Station, Des Moines, Iowa

Equipment Manufacturer Tells Senate of Material Shortages

Girton Manufacturing Company Head Emphasizes Importance of Food Processing and Distribution

(Statement by Paul Girton Before Senate Committee on Agriculture and Forestry)

I AM particularly happy to be invited to appear before this committee because I believe your invitation to me represents a recognition that it is just as important to process and distribute food as it is to produce it on the farm. So far as I know there is no Congressional committee on food as such, but here we have the Senate Committee on Agriculture and Forestry making a point of hearing testimony from an equipment manufacturer speaking in behalf of the need for adequate materials to process and distribute food—all food in this case being represented by dairy products as one major example. Offhand, it would seem too obvious to mention that there is no use in producing food unless you have the facilities to process and distribute it. Even though everybody accepts this in theory, it appears to be difficult to get this truism applied in practice by many government officials who have responsibility for providing materials to secure an adequate food supply. We hope the committee will assist in keeping government officials aware constantly that the production and processing and distribution of food is an integrated network of which every part is just as vital as every other part; a breakdown at any point in this network means that the consumer—military or civilian—does not get the food, and it also means that the problem eventually backs up to the point of production, namely the farmer. When products leave the farm they must be handled by a vast industry which includes many thousands of plants, many millions of employees, and billions of dollars. The value of food as it reaches the consumer is represented about half by production and about half by processing and distribution.

Government officials are willing to state for the record that the production, processing and distribution of food are defense-supporting and therefore essential. However, there appears to be much discrepancy between such statements and the actual allotments of materials for food production, processing and distribution.

Those of us who produce the equipment and supplies for the processing of milk and its products do not come before the committee with any specialized complaints or pleas in our behalf. In saying this I do not mean to imply that we have not had difficulties nor that we will not face more difficulties. We will continue to solve as many problems as we can by ourselves. We are using substitutions wherever possible. We are also exercising ingenuity and resourcefulness in conducting our manufacturing operations and in meeting civilian and military requirements. When we have special hardship cases, we exhaust every possibility of relief through the proper government agencies. But all along the line we do need a basic recognition of the equal essentiality of food processing and distribution with food production on the farm.

Food Processing Allocation Cut

Incidentally, food processing equipment is in a much worse position on materials than farm machinery, which, according to the testimony of the Secretary of Agriculture, reached an all-time high in the first half of this year, was at about the 1949 level in the third quarter, and is expected to be cut in the fourth quarter to only about 80 percent of the 1949 level. Controlled materials allotted for food processing equipment in the fourth quarter of this year are only about *half* the amounts used on the average during a similar period in the three years in 1948, 1949 and 1950. Further we are advised that the critical materials allotted to take care of food processing will go down rather than up during the first three quarters of 1952. This kind of outlook brings up the crucial question of lead time, which we seem to have difficulty in getting recognized in actual allocations practice although nearly everyone will concede the point in theory. If today a vital piece of equipment in a dairy plant breaks down beyond repair, it is simply not possible for the plant manager to call up a supplier and have another delivered the next day. Dairy processing equipment is made on a semi-custom basis, and large stocks of finished machines cannot at any time be held in inventory as they may be in mass production, standardized item industries. The dairy plant manager must anticipate his needs for equipment and place his orders normally two to four or five months in advance; the equipper-and-supplier in turn must make up his production schedules and place his orders for the materials with which to do the manufacturing; there must be some assurance that all the required materials will actually be available to him before he can start making the piece of equipment. Lead time in our industry varies of course with the type of equipment involved. In general, lead time is being greatly lengthened because of uncertainties as to whether materials actually will be forthcoming. The normal two to four or five months period before receipt of order and delivery of machine is already becoming six to twelve months. Sometimes the uncertainties involving materials are due to not knowing soon enough what a final

Better Dairies Everywhere Are Switching to
HAYNES SNAP-TITE NEOPRENE GASKETS
for Sanitary Fittings
Order through your favorite jobber.

NPA allotment will be; sometimes they are due to inability to obtain acceptance of an order placed in accordance with an NPA allotment, from an overbooked steel or copper or aluminum mill; sometimes a general uncertainty is aggravated by the final lack of just one small but vital piece of material or a single component without which a large piece of equipment cannot be completed. It is a most fundamental fact that actions taken *today* by the agencies that control critical materials will determine whether or not it will be possible *6 or 9 or 12 months hence* to process and distribute milk and other foods.

It would seem that there should be no difficulty in persuading government officials that the factor of lead time in the production of all food processing and food distributing equipment must always be taken into consideration. And yet we are sure that lead time is not realistically being considered when we hear in the government statements that there is no foreseeable danger in food supply because dairy plants are not reported as having to close down or unprocessed milk to be dumped in the ditch or the gutter.

The final point that I would emphasize is the depressing outlook for the next six, nine or twelve months for controlled materials. As you know, the Controlled Materials Plan was put into effect gradually beginning July 1st of this year. Controls orders are issued every day, and it appears that critical materials will not really be under full control until after the first of the year. So far our particular industry has been able to get along reasonably well. Now, however, the story changes as our allotments for each quarter are progressively lowered. The contrast between recent past and immediate future is due to a number of hard-boiled facts:

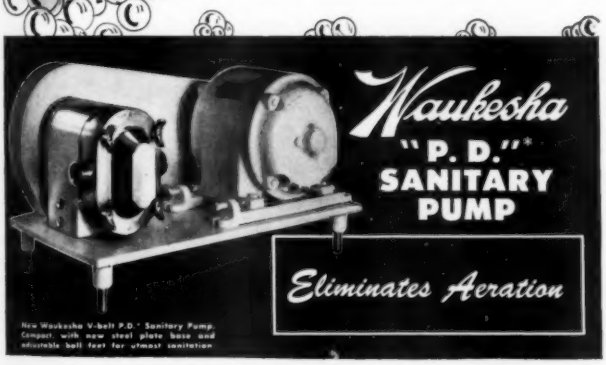
Why Material Is Scarce

1. One is that tremendous quantities of critical materials were bought up before the Controlled Materials Plan was put into operation, and I gather from both industry and government reports that very considerable quantities of critical materials are still being used up now by industries that cannot from the national viewpoint be considered as essential as those in the production, processing and distribution of food. Members of this committee are no doubt much better acquainted than I am with the types of uses that have been and still are eating up large quantities of critical materials without adequate justification of essentiality.

2. Another inescapable fact is that the direct defense program is now step by step moving into the mass production stage. We are told from all sides repeatedly that the amount of critical materials to be required for military use will continue to increase for a considerable time, irrespective of international developments. No patriotic American wants to take away from the military any materials that are essential to complete its program, but the increasing "take" of critical materials by the military is a fact that must be considered in determining how the remainder of our critical materials are to be divided up among civilian users. We hope that the government officials who have to make these decisions will—in practice as well as in theory—discriminate sharply between uses of critical materials that are really essential and those which only speciously claim to be essential. Judgments that are made

Bubbles have their place

But NOT in MILK



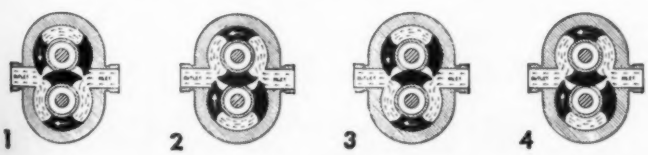
New Waukesha V-belt P.D.* Sanitary Pump. Compact, with new steel plate base and adjustable ball feet for utmost sanitation

You'll get *no bubbles, no aeration, no agitation* in your product when you use the new Waukesha Sanitary Pump. Your product comes *out* exactly as it goes *in*. With Twin-Impeller type of pumping, no air can be taken in, nor can bubbles form in the product pumped. The slow, gentle, positive, smooth, pulsation-less flow protects the quality and consistency of your product.

More NEW Waukesha Features . . .

New One-Piece O-Ring Sanitary Seal ● Corrosion-Resistant "Waukesha Metal" or stainless Steel on all product contact parts ● Time-Saving Sanitation, no cracks or crevices inside or outside ● Adjustable ball feet with higher floor clearance ● Positive Displacement pumping, no aeration ● Available in V-belt (Illustrated), Gearhead, and Reeves or U. S. Variable Speed Models — all with or without the Vented Cover.

CHECK THIS PRODUCT-FLOW DIAGRAM...



Sketches show the position of Twin Blade Impellers at each quarter revolution. Note four large chambers draw in and discharge four *full* loads at every revolution. No possibility of agitation or aeration.

*P. D. - *Positive Displacement for smoother flow.*

Write for the complete story on the NEW Waukesha P. D. Sanitary Pump.*

WAUKESHA FOUNDRY COMPANY
WAUKESHA, WISCONSIN

Waukesha 100% SANITARY PUMPS
Dependable Product of a Responsible Manufacturer

by government officials are now a matter of life and death to industries in the food field because we are entirely dependent upon the allotments of critical materials granted to us by the controls agencies.

In closing I would like to highlight the points which I have been trying to bring out, namely:

A Complex System

Point 1. The production, processing and distribution of food is a complex and integrated system in which every essential part is just as important as every other part, and the total minimum requirements of which are defense-supporting and indispensable to the functioning of our military establishments, defense production operations, and the fundamentals of our civilian life.

Point 2. Taking the dairy industry as an example of the food field generally, we are confronted with realities of lead time which must be taken into consideration by government officials if we are to continue to make available the minimum amounts of equipment and supplies necessary to see that the foodstuffs produced are also processed and distributed so that they reach the consumer, whether he is a soldier or a civilian.

Need High Priority

Point 3. Intensified materials shortages and a tightening of controls make it much more imperative in the future than has been the case in the past that government officials translate into daily program operations the principle that the production, processing and distribution of food be accorded a priority status immediately after the very essential requirements of our direct military program.

Gentlemen, speaking as a manufacturer of dairy processing equipment and also in behalf of food processing and distribution equipment generally, I think I can say in all earnestness that we are here today in the public interest, not merely our own. We hope that this committee will continue its highly effective and greatly appreciated work of keeping government agencies alert to the ever-present need of maintaining the nation's lifeline of food.

NINE MINUTES A QUART

In the days of William Penn you either had a cow or got your milk from a neighbor without any regard for sanitation, diseased cattle or other health considerations found to be so important today; and you probably paid a price relatively higher than in 1951. Even as late as the turn of the century in 1900 the average working man had to work 27 minutes to earn the price of a quart of milk and it was dipped from a can. Today, it takes only about 9 minutes of work for that same quart and it is a safe, high quality product—delivered in a sealed, sterilized container, pasteurized, produced under laboratory control and approved by Federal, state and local health authorities.

THERE WOULD BE NO CRISIS...

if there were no selfishness.

FOR FIFTY YEARS—We have selfishly used advertising simply to toot our own horn. Here, then, is a loud toot for something else—"THE WORLD REBUILT"—a new book by Peter Howard. Page after page it tells the story of how ordinary men and women are driving selfishness out of their own lives and businesses around the world. $1.00 at your bookstore. Buy copies for all your employees, even if you have to take the money you intended to spend for FORBES Chocolate.

Forbes — The BENJAMIN P. FORBES CO.
2000 WEST 14th ST. • CLEVELAND 13, OHIO

HAVING TROUBLE

preventing Coli-form Bacteria on your sanitary valves, pistons and pumps?

Use The 100% Sterile Lubricant
IN THE ORANGE TUBE

- Homogenizer Pistons
- Sanitary Valves
- Ammonia Valves
- Capper Head Guides
- Sanitary Seals
- Positive Action Pumps

Yes, it's true! Now, there is a lubricant for your sanitary valves, pistons and pumps—a 100% sterile lubricant that will greatly help you overcome coli-form bacteria worries. Find out for yourself why leading dairy plants the country over will use no other lubricant for their sanitary lubricating needs!

ORDER TODAY
$3.00 for 6 — 4 oz. tubes
$5.50 for 12 — 4 oz tubes
F.O.B. Columbus, Ohio

McGlaughlin Oil Company
3750 E. Livingston Avenue — Columbus, Ohio
Packaged by the authority of the Famous Lubricants, Inc.

SET UP NEW DEPARTMENT

The Wisner Manufacturing Corporation of 122 Hudson St., New York, N. Y., have recently set up a new department to be known as "The Stick Confection Equipment and Specialty Division."

This department has been set up because the company has felt it is necessary, in order to keep pace with the new trends in ice cream manufacturing and merchandising.

Wisner is happy to announce that they have employed the services of Mr. Irwin H. Grossman to head up this division.

Mr. Grossman has been well known in the Ice Cream Industry for a good many years and he brings with him a thorough knowledge of this particular phase of the business and prides himself on the fact that he has been instrumental in the installation of a great many frozen confection operations in plants all over the country, particularly with progressive ice cream manufacturers who have realized the value of the stick confection business.

Mr. Grossman was connected with the Liquid Carbonic Corporation for a great many years and resigned in 1944 to enter business for himself.

During the second world war he acted as coordinator for a group of independent ice cream manufacturers and quite recently supervised the designing and building of two $1,000,000 Diced Cream Plants in the East for Arden Farms Co. of California.

●

NATIONAL DAIRY WINS "OSCAR"

For the third successive year, National Dairy Products Corporation was judged as having the best annual report in the dairy products industry by the independent board of judges in the Financial World survey.

The bronze "Oscar of Industry" trophy will be presented to L. A. Van Bomel, president of the company, at the annual awards banquet at the Hotel Statler, New York, N. Y., on October 29, 1951.

National Dairy's Annual Report for 1950 was distributed to 65,000 stockholders living in every state, in territorial possessions of the United States and in some foreign countries. It was the company's 27th annual report.

A total of 5,000 annual reports were considered in the competition, the eleventh in the series of surveys, and these were judged in 100 industrial classifications for the "Best-of-Industry" awards.

●

ART DIRECTOR FOR GAIR CO.

Wray H. Callaghan, sales manager of the folding carton division of Robert Gair Company, Inc., New York, manufacturers of folding cartons, paperboard and shipping containers, announces the appointment, effective October 15, 1951, of Kenwood Dixon as art director for the company. He will coordinate art efforts for the company, to maintain a high level of quality in material produced in Gair plants for its customers.

Mr. Dixon was art director at Kenyou and Eckardt, Inc., for many years, and also served three years in the U. S. Navy as a Lieutenant. He studied at the Art Students League, and is a graduate of Pratt Institute in Brooklyn, N. Y.

for Complete
COMPRESSOR PROTECTION
install a **PHILLIPS LIQUID RETURN SYSTEM**

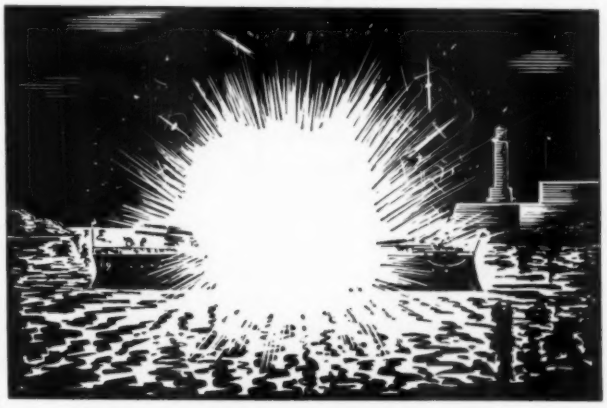
- **SAFEGUARDS** Ammonia Compressors
- **ASSURES** Economical Operation with Full-flooded Coils

Here's the proved method of protecting ammonia compressors from the damages of liquid slop-over. Phillips Liquid Return Systems effectively return refrigerant liquid from a suction line trap to the liquid receiver or liquid line—and, effect savings in operation. With a Phillips System, full flooding of coils is possible for maximum efficiency of evaporation and properly-conditioned suction gases are assured.

PHILLIPS FLOAT CONTROLS
For "Freon"— 1 to 1000 Ton Cap
For Ammonia— 1 to 2000 Ton Cap

Several types of systems are available: for Gravity, Injection Lift and Pressure Lift operation, in sizes up to 1000 tons. A Phillips Engineer will gladly help to select the right one to assure complete protection for you. Write today for full information in Bulletin LRS-50.

H. A. PHILLIPS & CO. DESIGNERS AND ENGINEERS REFRIGERATION CONTROL SYSTEMS
3255 W. CARROLL AVENUE • CHICAGO 24, ILLINOIS



AT THE TURN OF THE CENTURY

On the evening of Feb. 15, 1898, the U. S. S. Maine exploded and sank. The actual cause of the disaster has never been determined.

In March 1901, just three years after this historic event, Benjamin P. Forbes started in the chocolate business. FOR 50 YEARS, the name FORBES has been identified with quality and flavor.

- A TRUE CHOCOLATE FLAVOR—NO BITTERNESS
- FLAVOR KEPT IN SUSPENSION—NO SEDIMENT
- FORTIFIED WITH PURE VANILLA PLUS VANILLIN
- CONVENIENTLY PACKED—ECONOMICAL TO USE

Write or wire for a FREE sample and compare it — or better still, send us a trial order.

Quality First Forbes
The BENJAMIN P. FORBES CO.
2000 WEST 14th ST. • CLEVELAND 13, OHIO

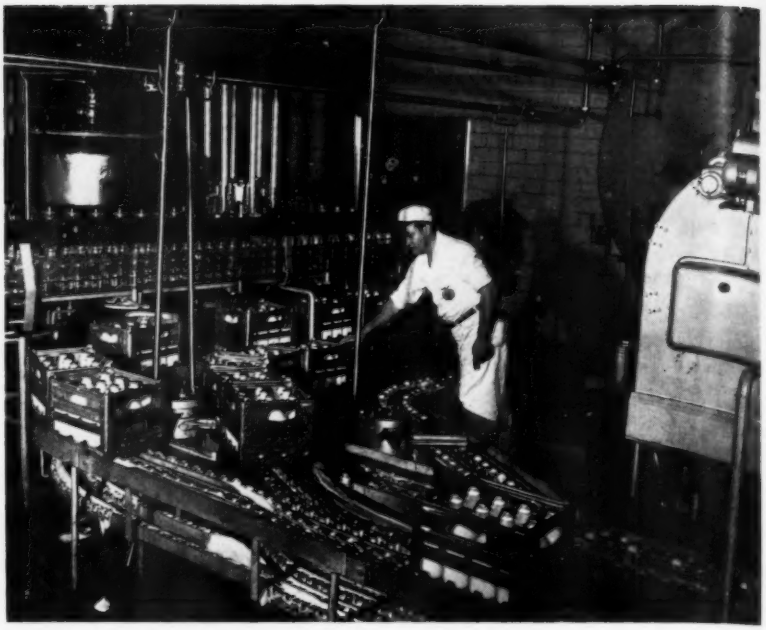
SUPPLEE PLANT

(Continued from Page 28)

that have been added, the wonderful little devices that have been created to supplement these fundamental tools that makes this Tabor Avenue plant a joy to visit.

Yankee Ingenuity

The fork lift trucks and the "levadock" are the most spectacular of the devices that have been employed to meet particular problems. There are, however, less prominent strategems that play key roles in the movement of products. The final design of the bottle filling arrangement shows bottles leaving the washer and moving by conveyor to the filler. The bottles come from the washer onto the chain conveyor in a single line. In each processing unit, however, there are two fillers which means that the single-line of bottles coming from the washer must be divided up into two lines. The solution is so simple that one is reminded of the plumber who charged $10.00 for tightening up a nut that was necessary to stop a leak. The plumber explained his bill by saying, "Fifty cents for tightening up the nut. Nine dollars and a half for knowing which nut to tighten." The bottle washers are big, sixteen bottle wide affairs. They deliver the washed bottles onto a chain conveyor. Just outboard of this chain conveyor is a second chain conveyor. Between the point where the eighth and ninth bottles hit the conveyor as they come from the washer is a short, metal finger or divider. As the bottles are placed on the conveyor they immediately start to move along to the fillers. The first eight bottles remain on the original conveyor. The remaining eight bottles are shunted over onto the second conveyor as they come up against the metal finger.



Yankee ingenuity is shown by this device for regulating movement of cases on merging conveyor lines. Cylindrical device has arms that hold back cases and provide for orderly movement onto single conveyor.

Close to the point where the bottles are divided there is another smart little device. In a operation where the number of bottles runs into the tens of thousands an occasional maverick gets into the line. In order to be sure that only the proper container goes to the filler there is a sort of bridge arrangement adjusted to the particular type of bottle that is being used. Only one type and size of bottle can pass under this bridge system. Mavericks are held back by the barrier and removed from the conveyor by an attendant.

The unadulterated champ in the clever contrivance department is a device regulating the flow of filled cases on two conveyor lines that merge into one. There are three bottle filling sections, each with two high speed fillers. From the fillers the bottles go to operators at the conveyors who take the individual bottles from the filler conveyor and pack them into the cases that come from the case washer. Each filling section has its own conveyor that runs side by side with the conveyor serving the adjacent section. Consequently when the last section is reached there are three case conveyors. The conveyors make a bend just beyond the last filling

Mere Physical Labor

will not dig up the additional business you need.

***Use the steam shovel* of modern merchandising and advertising to get full 1952 results.**

Consult us about 1952 steam shovel methods.

G. P. GUNDLACH & CO.

BOX "A"
CINCINNATI 3, OHIO

section and two of them merge into one at this point. The third joins them a short distance further along. Obviously some sort of regulatory system is needed to keep the flow of merging cases from piling up into the wreck of the century.

At the Tabor Avenue plant a cylindrical mechanism about four or five inches in diameter has been erected at the "Y" formed by the two converging conveyors. Two arms protrude from this cylinder, one on either side. One arm is approximately nine inches long, the other about five. These arms extend out sufficiently far so that passing cases will engage them. As the cases on one conveyor come along they push the arm on their side forward. This causes the other arm to move back and lock. Any cases that come along on that side run up against the locked arm and are stopped. The arm that is temporarily locked stays locked just as long as there is pressure against the other arm. Usually the cases come in bunches of two or three or four at a time. Then there will be a space of a few feet before the next group comes along. When a group of cases has passed through the junction, the brief interval before the next group moves into position means that the pressure on that arm has been relaxed. As the pressure relaxes the pressure on the other arm asserts itself. The moment the pressure on one arm ceases the other arm is pushed forward releasing the cases on that side and the opposite arm is pushed back into the lock position. The cases flow, first from one conveyor and then from the other, as the arms swing backward and forward according to whichever arm is first subjected to pressure by the cases. A gentleman from North Carolina was visiting the plant not long ago. Like most visitors he saw the fork lift trucks, the loading platforms, the "levadock," the cold room, and all of the rest of the marvelous facilities for handling milk. But he was particularly fascinated by the traffic regulator at the junction of the conveyors. He would stand there fifteen, twenty minutes at a time watching the thing hold back on one side and then on the other. Joe Crumlish, Supplee's chief engineer, saw him standing there and observed. "Works pretty slick, doesn't it." The gentleman from North Carolina agreed that it did and then added slowly "I suppose this is what folks mean when they talk about Yankee ingenuity." And that is just about what it is, Yankee ingenuity.

There are few problems that will not yield to logic. At Supplee-Wills-Jones they started with a basic idea. They broke the idea down into practical segments of the main concept. Then they tackled these smaller parts of the whole. They tried this and they tried that. They drew it one way and then drew it another. Eventually they came up with a plan that they found satisfactory. It was logical. It was simple. It would do the job that was desired. The result is beautiful. It's beautiful because it is logical, because it is simple, because it is eminently a practical milk plant. It is also beautiful because it is the newest milestone on the highway of dairy progress. It is a proud symbol of the ideas that are the foundation of a great industry.

ORANGE DRINK QUALITY CONTROL

Now that over half of the dairies in the United States are distributing Orange Drink, the question of "Quality Control" is of the utmost importance.

The first step is careful selection of a Base or Concentrate of known good quality. Some of the reputable producers have been supplying the dairy industry for 16 or 17 years, but the rapidity with which dairies have added Orange Drink to their delivery items, has given mushroom growth to numerous concerns, who, without any experience, scientific "know-how" or knowledge of the extreme care with which Concentrate made from real fruit juice must be handled, have crashed the vast dairy market.

A good rule of thumb in selecting an Orange Drink Base, is to choose one which has been satisfactorily supplying the dairy industry for a long time, and one which produces its Base where oranges are grown—not one located thousands of miles from the orange growing areas.

The second and most important step in "Quality Control" is something that each individual dairyman can regulate. Each reputable producer of dairy Orange Base has scientifically worked out recommended formula—a careful balance of the ratio of acidity to sweetness. If too much water or too little sugar is added, it throws off the acid-sugar ratio and produces an Orange Drink of mediocre quality. Every dairyman can check periodically and see that the manufacturers recommended formula is being accurately followed.

Because of the heavy concentration of Orange Drink Base, the dilution to make into beverage form is tremendous—as high as 50 to 1. Because of this, plant men are inclined to believe it makes little difference in the Orange Drink if an extra gallon (or two or three) of water is added or if a few pounds of sugar are eliminated.

Production quantities should be gauged as carefully as possible so that Orange Drink is bottled frequently—either every day or every other day—so that it will always be sweet and fresh.

Mixing tanks or vats should be carefully calibrated and marked for batches of various sizes, and the recommended formulas should be prominently posted and carefully followed if the dairy is to turn out a quality Orange Drink which is a worthy running-mate for their quality Dairy products.

HOWE SCALE APPOINTS

The appointment of Mr. Jack H. Brewer as Manager of the Minneapolis Branch was announced by Mr. Richard F. Straw, Vice President in Charge of Sales. The Howe Scale Company, Rutland, Vt. Mr. Brewer was formerly associted with the Company's other Branches in the Midwest.

Mr. Brewer will supervise the Minneapolis Branch sales and service activities for Howe Scales and Hand Trucks in Minnesota, northwestern Wisconsin, northwestern Iowa, North Dakota, South Dakota and western Montana.

The Branch is located at 404 Washington Ave., N., Minneapolis 1, Minn.

The appointment of Mr. Lierd E. Grant as Manager of the Los Angeles Branch was announced by Mr. Richard F. Straw, Vice-President in Charge of Sales, The Howe Scale Company, Rutland, Vt.

Mr. Grant will also continue as Manager of the San Francisco Branch where Mr. William J. Tucey has been appointed Assistant Branch Manager.

Mr. Grant will supervise the Los Angeles Branch sales and service activities for Howe Scales and Hand Trucks in southern California, Arizona, western New Mexico, and the El Paso region of Texas.

The Branch is located at 1237 East 8th St., Los Angeles 21, Cal. Phone—Van Dyke VA-9144-5.

●

ACQUIRE PENSACOLA DAIRY

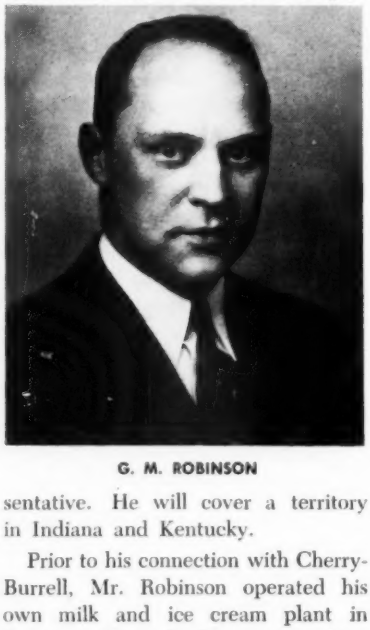
Quality Dairies of Pensacola, one of northwest Florida's pioneer milk distributors, has been acquired by The Borden Company, Harry Parazine and Charles Emery, owners of the dairy, have announced. The name has been changed to Borden's Dairy.

They emphasized that the change of ownership will not affect the plant's operation or products, and that all employees will remain in their present positions. Parazine and Emery have been active in the Pensacola dairy business for 31 years, while Borden's Ice Cream Division began operating a plant in the city in 1948. Borden's first entered the milk and ice cream business in Florida with the acquisition of Poinsettia Dairies Inc. in 1943.

●

CHERRY-BURRELL REPRESENTATIVE

R. R. Cundall, Manager of the Cherry-Burrell Branch in Cincinnati, Ohio, announces the appointment of Garner M. Robinson as sales representative. He will cover a territory in Indiana and Kentucky.



G. M. ROBINSON

Prior to his connection with Cherry-Burrell, Mr. Robinson operated his own milk and ice cream plant in Somerset, Kentucky for ten years. Previously he was connected with another dairy plant in a sales and plant operation capacity. Mr. Robinson brings a varied experience in plant operating problems to his new position. This should be of considerable value in his contacts with dairy plant operators. He will continue to live in Somerset, Kentucky.

●

TO TRADE ASSOCIATION GROUP

Benj. G. Eynon, Executive Vice-President of the Pennsylvania Association of Milk Dealers, recently was elected as a director of the American Trade Association Executives to serve until 1945. This association, headquartered in Washington, is the national representative of regional, state, and national trade associations and Mr. Eynon is the only representative from the dairy industry out of the 25 directors. He has served with the Pennsylvania Milk Dealers since July, 1935.

●

BORDEN EXECUTIVE DIES

Theodore W. Waibel, 57, Secretary of The Borden Company, died at his home in Great Neck, N. Y., on September 16, after a long illness. Mr. Waibel joined Borden's in 1915, as a stenographer in its Legal Department. Two years later, he transferred to the Treasurer's Office, of which he was appointed Chief Clerk in 1924. Recalled to the Secretary's Office in 1929, he was elected Assistant Secretary in 1931, and Secretary of the Company in 1944.

Mr. Waibel attended Drake Business School and Pace Institute. He was a member of the National Association of Corporate Secretaries, and was a physical director for the Y.M.C.A. in New York City.

Every plant can now enjoy the time-saving and labor-saving help of several Girton Roll-A-Tables. New low price model—sturdily built of heavy gauge galvanized steel.

WRITE FOR PRICES ON OTHER SIZES

Girton Case Trucks carry heavy loads with ease and safety. Available in a size to fit your needs for either square or round bottle cases.

ORDER FROM YOUR JOBBER OR DIRECT

GIRTON MANUFACTURING COMPANY
MILLVILLE, PENNA.

CHERRY-BURRELL WINS AWARD

Cherry-Burrell Corporation, Chicago, manufacturers and suppliers to the dairy foods industry, has again been selected as a winner of the Financial World's "Highest Merit Award" for its 1950 annual report in the eleventh such contest.

Financial World, a weekly investment and business magazine published in New York City, annually conducts a contest with a board of judges considering the annual reports of the country's leading companies

The "Highest Merit Award" citation to this dairy equipment manufacturer and supplier, for distinguished achievement in annual reporting reads:

"Issued by the Financial World in recognition of the excellence of its 1950 annual report to shareholders. To certify that the 1950 financial statement of the above company was judged as among the most modern from the standpoint of content, typography and format of the 5,000 annual reports examined during 1951."

●

ICE CREAM DIVISION MANAGER

Harry Archer has been appointed assistant to Roy D. Wooster, vice president in charge of The Borden Company's Ice Cream Division. Most recently Mr. Archer was manager of Borden's Pittsburgh and allied western Pennsylvania ice cream operations. Before that he has served in the company's Mid-West District in various capacities.

●

NEW SECRETARY FOR NO. DAK.

A new secretary and a new home have been acquired by the North Dakota Dairy Industries Association. The directors agreed to move the Association office from Fargo to Jamestown. Mr. H. H. Joos, President of the Jamestown Chamber of Commerce, has been elected to the office of Executive Secretary. Mr. Joos succeeds Mrs. John Burnham who has been acting as the Association's secretary for the past two years.

Mr. Joos will inherit a going concern from his predecessor. The only known woman executive secretary of a dairy products association in the United States, Mrs. Burnham added to the stature of a growing organization.

●

BRITTANIA BELLUM CANIS

Food firms in Edinburgh in Scotland have declared war on dogs. One shop at the West End says quite badly 'In the interests of hygiene dogs are not permitted in this shop'. In another establishment not far away the firm is less adamant but more biting. A notice asks clients to keep dogs on the lead while shopping and adds this acid comment 'We can supply a chain if necessary to allow you to do so'.

Attitude of these food retailers is that public interest in food hygiene has reached a point where the retailer can afford to be blunt on the subject. In the past retailers hesitated to take action for fear that the customer would take offence. Now they believe that most customers are with them in objecting to dogs in shops – and are acting accordingly.

STREAMLINED FEEDING SYSTEM

University of Illinois Specialist Develops Unique "Cafeteria" Method of Feeding

Dairy cattle in the future may get their grain cafeteria style instead of by the expensive "spoon-feeding" method commonly used now.

To "Bossy," it probably won't make any difference. She'll eat just as much and give just as much milk. But to the dairyman with a pen barn and milking parlor, the system will mean a big saving in steps and chore time.

Dairy specialist K. E. Harshbarger in the Illinois College of Agriculture says the cafeteria idea is merely self-feeding grain and hay to cows at the same time. He believes self-feeding is more practical than most dairy farmers and scientists would admit. And a test last winter confirmed his belief.

Six Cows Used

Harshbarger used six cows. Each cow received 47 pounds of self-fed hay and grain mixture per day. Seventy per cent of the mixture was hay—coarsely ground alfalfa run through a hammermill. The other 30 percent was standard grain mixture – ground corn, oats, soybean oil meal, linseed oil meal, bran, bonemeal and salt.

One pair of cows received only the self-fed mixture. Another pair got the mixture plus 13 pounds of silage. And the third pair got the mixture plus 4½ pounds of loose alfalfa each day. The three pairs were rotated so that each pair was fed all three rations in the test.

Average milk production stayed almost the same for cows on each ration. It varied only from 29½ to 30½ pounds of milk per day, converted to

Kurly Kate
METAL SPONGES
Designed especially for cleaning all types of dairy equipment and utensils. Will not rust or splinter, cut the hands or injure metal or plated surfaces. Kurly Kate Metal Sponges are fast working, easy to use, and easy to keep clean. Made in STAINLESS STEEL, NICKEL SILVER and BRONZE.
KURLY KATE CORPORATION
2215 S. MICHIGAN AVE. CHICAGO 16, ILL.
GUARANTEE
Send for a trial order
Satisfaction fully guaranteed
Kurly Kate
stainless metal sponge
FOR EASIER INDUSTRIAL CLEANING
SOFT ON HANDS
SANITARY
ORDER FROM YOUR
JOBBER OR WRITE DIRECT

Matter of Fact
BY EDWARD A. JOSEPH
1866
OLDEST MILK BOTTLE
DISCOVERED IN NEW YORK BY DAVID GWINN, PRES. PENNBROOK MILK CO.
1884
GLASS BOTTLE INVENTED BY DR. THATCHER
1890
F. K. WARD'S MILK-PRESERVING JAR WITH WIRE CLOSURE
DEVELOPMENT OF GLASS MILK BOTTLES FROM 1866 TO 1945
1898 BY ADDING A HANDLE, A.G. SMALLEY ATTEMPTED TO MAKE THE GLASS BOTTLE EASIER TO FILL AND POUR
1900 ABBOTT, REALIZING THE MODERN NEED OF CONSERVING SPACE AND ENERGY DEVELOPED A "SQUARE" MODEL
1901 COLORED GLASS MILK BOTTLES WAS USED TO KEEP OUT THE HARMFUL RAYS OF THE SUN
1910 THE FAMILIAR ROUND BOTTLE
BREUNINGER WAS THE ORIGINATOR OF THE 1/4 PINT BOTTLE IN 1918
THE SQUARE DESIGN OF TODAY

4 percent butterfat. And the cows gained between 7/10 and 8/10 pounds in weight daily. Harshbarger believes that all three pairs would have done about equally well on the self-fed mixture alone. There was no need for silage or loose hay.

Self-feeding has other advantages besides saving time and labor. You don't feed dusty grain in the milking parlor – where cleanliness is important – or in a separate stall.

This winter Harshbarger is planning more tests to correct two disadvantages found in the first tests. One drawback was feed wastage. The cows would nose the feed out of the self-feeder into the bedding. This can be corrected by building uprights on the self-feeder, like stanchions, to keep cows from throwing their heads around.

The other bad feature of self-feeders is that all cows get the same proportion of grain to hay. But you should feed them grain according to production. However, you can mave three feeders with different levels of grain for your best, medium and average producers.

Harshbarger is going to test this idea this winter using a new design of feeder and different breeds besides Holsteins.

With the new idea of self-feeding hay and grain to cows at the same time, dairymen now have possibly the greatest labor-saving scheme in a long time.

SANITARIANS ON HOUSEKEEPING

Clean Plant Is Morale Booster for Employees and Owners

"A clean plant is a source of added profits because quality is maintained and losses due to spoilage or condemnation are reduced to a minimum," M. A. Williamson, special representative of the International Correspondence Schools, told the Fifteenth Annual Meeting of the National Association of Sanitarians at Miami Beach, Fla., recently.

Mr. Williamson, speaking on "Food Plant Sanitation Education," pointed out that a clean plant also contributes to employee morale and will raise the standards of production as a result.

"The aggressive processor knows, in addition, that a clean plant is a real asset in that it becomes a show place for visiting buyers and the public," Mr. Williamson said.

Development of new techniques calling for changes in plant routine, new combinations of metals and nonmetals, new cleaning and detergent compounds, new processing operations, the trend toward replacement of batch operations with continuous processing and increasing emphasis on quality control were cited by Mr. Williamson as placing new demands on the skill and training of the food plant sanitarian.

Varied Knowledge

"Today's food plant sanitarian," Mr. Williamson said, "needs to know something of the fundamentals of mathematics, organic, inorganic and sanitary chemistry, bacteriology, and the sources of water, its utilization, disposal as well as sewerage and waste disposal." He also needs to know something of the Federal, State, County and Municipal laws and regulations covering the food field, Mr. Williamson added.

Turning to the problem of locating trained "plant housekeepers," Mr. Williamson suggested hiring them from graduating classes of accredited schools teaching sanitation, or training them on the job through home study courses in food plant sanitation now being offered.

"The latter course," he said, "has several real advantages in that men selected for training have already es-

tablished themselves in the organization and have shown that they are desirous of getting ahead and are willing to use their spare time to broaden their educational equipment. They know the plant and will use it as a laboratory for trying out the things they learn in their studies. Management benefits by this and the ultimate result will be a staff of trained men and a continuing source of replacements who will insure the processor of the best of clean and sanitary plants."

●

LET'S TALK ACCOUNTING

(Continued from Page 42)

insurance, interest, maintenance, light, power, water, cleaning supplies, taxes, all are overhead.

The collection and allocation of these costs are not as difficult a problem as might first appear. First, certain logical groupings, by process, are made, to which costs are to be assigned.

These groupings could be: receiving and cooling, bulk storage, pasteurizing, homogenizing, packaging, package storage. Each of these groups is charged with its costs. For example, "packaging" would be charged with cost of depreciation of fillers, rent for occupied space, insurance on the fillers if ascertainable as such, labor for the operation, maintenance, social security taxes on the wages on the operator. The total filler costs are then assigned to finished product on a basis such as units filled. After all costs are collected and assigned, each units of finished product will have a true cost attached to it, broken down into as much detail as may be desired.

The real worth of any cost accounting system lies in the immediate results obtainable. In practice, a daily cost sheet may be maintained to show detailed costs by product as the products are processed and sold. The idea cannot be expanded here—but cost systems are readily adaptable to distribution costs as well as production costs, thus rounding out the whole profit picture. With a full and detailed knowledge of his costs, any dealer will be in a better competitive position.

●

ANTIBIOTIC CONTROL

(Continued from Page 48)

ment) is adhered to it is very probable that the level of the antibiotic will be very low or that no detachable amount will be present.

Some objections to the six-milkings segregation period have been voiced on the basis that such a proportionate part of the entire production of a lactation period would seriously affect the net profit and that such a loss would be a considerable sacrifice on the part of the dairy farmer. When analyzing such statements it is immediately apparent that antibiotics have been doing such excellent jobs of restoring diseased udders to their normal milk producing capacity that some dairymen, in these few years that the "wonder drugs" have been available, have already forgotten the "sacrifices" in milk or the cow herself that had to be taken because antibiotics had not yet been discovered. Another issue should likewise receive consideration because it stems from the "sacrifice" of milk that is to be segregated. Only the "whole, fresh, clean, lacteal secretion obtained by the complete milking of one or more *healthy cows*" is to be considered "milk." Certainly a cow having a diseased udder ,however mild the infection may be, cannot be considered "healthy." Truly, the antibiotics are "wonder drugs," but to completely rid infected tissue, such as that of a cow's udder, of all infectious organisms in less than three days would be "working wonders."

From the standpoint of controlling mastitis, authoritative sources of information should be contacted. In general such programs are based on removal of the causes that lead to udder infections. Dairy Specialists of the Agricultural Extension Service of the State should be consulted regarding such mastitis control program.

The Committee on Antibiotics in Milk is interested in the development of tests that may be employed in dairy plants as a means of detecting the presence of antibiotics in milk. At the present time there is no test that is sufficiently rapid for receiving line purposes. The most reliable tests now available require more than one hour for completion. Nevertheless, they are useful in a periodic checking program in a similar manner that other quality tests, such as the methylene blue test, have usefulness.

Past experiences have demonstrated that control programs fail unless the educational aspect is followed by the application of rigid testing programs that will supply the convincing evidence in those cases where it is most likely that compliance is not voluntary. It is encouraged, therefore, that testing programs be inaugurated. Methods are available that will yield reliable results in a period of a few hours. Although the results will be too late in most cases for the plant operations of that day, they will serve to identify the producer not taking the precaution to segregate the antibiotic-containing milk.

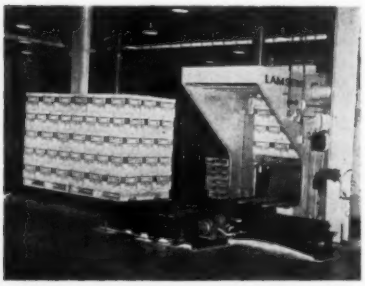
Better Cottage Cheese Can Be Made with
F-L Coagulator
BETTER TASTING — BETTER KEEPING QUALITY — MORE YIELD — MORE PROFITS
The most important and critical step in cottage cheese making always was and still is to PROPERLY SYNCHRONIZE coagulation with the varying percentage of acid and taste at cutting time.
F-L COAGULATOR is Flexible and will synchronize coagulation in overnight set, the five hour set or the two and one-half hour set at titrable acidities ranging from .50% to .75%.
Write today for your sample.
Ask about BIG SAVINGS in CO-AD Vitamin D for whole milk.
FLAVOR-LINE, INC.
845 So. Wabash Ave. Chicago 5, Illinois

Low Cost Sanitary Way
to **CLEAN ALL CANS**
Thoroughly cleans inside of straight or irregular shaped cans. Multiple fingered rubber scrubber gets to every corner and crease. Electrically operated. Attach water line, plug in and it's ready to go.
Write, Wire or Call for FREE FOLDER
GORDON JOHNSON COMPANY
2519 U Madison St., Kansas City, Mo.
NEW Johnson CENTRI-FLO CAN WASHER
Scrubs INSIDE ANY CAN GETS THEM CLEAN!

USING OUR SEPARATOR

Automatic Pallet Loader

THE LAMSON CORPORATION, Syracuse, N. Y., announces a newly designed Automatic Pallet Loader arrangement for intermediate storage of pallets awaiting removal after being loaded. The new arrangement now makes it possible to accumulate up to six loaded pallets while waiting for a fork truck to return from the stacking area. Without this arrangement, the truck might not return in time to remove loaded pallets as they are discharged, and automatic loading operations would be delayed.



Loaded pallets are pushed off the Pallet Loader's discharge conveyor and onto a second conveyor at right angles to the discharge. Automatic tripping mechanisms operate a ram which pushes the loaded pallet onto the right-angle storage conveyor.

The storage arrangement is particularly useful when alternate pallets are loaded with different commodities. Trucks may now take these commodities to stacking zones at various distances from the Loader without interrupting the schedule of the Loader or the truck. Otherwise, on long hauls the Loader might be delayed waiting for the truck while on short hauls the truck might have to wait for the Loader. The temporary storage arrangement not only accumulates pallets which are loaded while the truck is on a long haul, but also supplies a backlog from which the truck can load when returning from a short haul.

The Pallet Loader itself eliminates *manual* pallet loading in mass production operations. Cartons or cases are conveyed to the top of the loader where electro-mechanical devices position them and push them onto pallets. Not only does the machine position alternate containers for best pallet arrangement, but when more than one size container is in production, the machine automatically positions intermediate predetermined pallet lots so that each is stacked properly on its pallet. A magazine within the pallet loader automatically supplies pallets as preceding loads are completed.

For further information on the use of the Pallet Loader for handling specific types and sizes of containers, write the Lamson Corporation, Syracuse, N. Y.

Carrier For Milk Containers

"TWIN TOTE" is a salesation- Conceived to develop more unit sales, greater profit, customer satisfaction. Mrs. Housewife gains a threefold advantage in "TWIN TOE"—first, a handy carry-out carton; second, she enjoys half-gallon economy; third, she has two individual quarts of milk to be opened one at a time.

The idea for "TWIN TOTE" was sparked when one of the larger dairies projected the paper half-gallon bottle on the Louisville market. This all came as a surprise and consequently started quite a buzz among the other dairies. There were all sorts of com-

NEW *Cationic* CLEANER for DAIRY and CHEESE PLANT EQUIPMENT

SANITIZES · CLEANS · DEODORIZES

THE Key TO PERFECT SANITATION

KLEEN-EZEY

CLEANER-SANITIZERS
LIQUID—POWDER
FOR DAIRY FARMS

LAZARUS LABORATORIES, INC.
137 W. EAGLE ST. • BUFFALO 2, N.Y.
contact your jobber

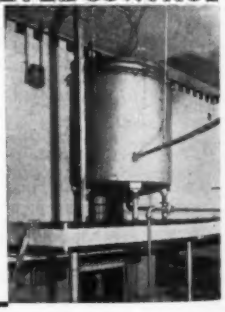
Lumenite Electronic
MILK LEVEL CONTROL

controls—to within 1/100 inch—the level of milk or mixtures in tanks, vats, pasteurizers, coolers, freezers, fillers, etc.

Absolutely sanitary
Instantly cleaned
No moving parts
No floats

Saves Milk—Money—Time—Labor
Used by leading dairies, coast to coast.
Write for Bulletin L 140

LUMENITE ELECTRONIC CO.
407 S. Dearborn CHICAGO 5, ILL.



ments, some optimistic but the majority pessimistic.

"TWIN TOTE" was sold to 90% of the dairies bottling paper in the Louisville, Ky., market. The dairies that have introduced this carrier report good results.

For more complete information, write directly to the Carl Kister Company, 516 W. Main St., Louisville 2, Ky.

●

Merchandising Idea

NEW LIBBEY Han-De-Canter set shown above provides a merchandising idea to assist dairies in sales of by-products, according to the Dairy Container Sales Division of Ownes-Illinois Glass Company. The set consists of a decanter complete with plastic snap-on cap and four six ounce juice tumblers either plain or with Applied Color Lettering. It is suggested that dairies package cottage cheese, yogurt, and sour cream in Libbey Safedge tumblers and offer this Han-De-Canter set to housewives for returning several jar caps plus a small additional charge. Two stock decorations include red brown, grey, green and chartreuse ACL bands; and varied red and white bands. Collar on decanter gives instructions in its use as a mixer for juices or other products and tight fitting snap-on cap makes it an ideal mixing device in the home. Five piece set with stock decorations packaged in a printed die cut carton is available to dairies at 56c per set in minimum lots of 300. The Han-De-Canter set is manufactured by Libbey Glass Division of Owens-Illinois. For further information, contact Dairy Container Sales Division, Owens-Illinois Glass Company, Toledo 1, Ohio; or Glass Container Branch Sales Offices of Owens-Illinois.

●

Trucks Described

A TWELVE-PAGE Condensed Truck Catalog (Form 508-B) has been just released by the Howe Scale Company, Rutland, Vt. Specifications and illustrations are shown for the complete line of the latest Howe two and four-wheel Hand Trucks, Trailer Trucks, Baggage Wagons, Platform Skids, Dollies, Lift Jack Systems, Wheels, Casters and Molded-On Rubber Tired Wheels.

This catalog also shows modern Howe construction features engineered for long, trouble-free and economical materials handling service. Howe Trucks have been famous for ruggedness and dependability for nearly a century.

●

Folder On Batavia Bodies

A NEW SIX-PAGE catalog folder is now available on Batavia Body Company's three basic ice cream delivery body styles. Done in striking three-color—with file tab for fast file reference—the folder illustrates in detail the distinct construction features offered in Batavia's "DeLuxe Composite" body, the "Aluminum" body, and the "Economy" body.

Purpose of the folder, Batavia officials announce, is to show prospective body users the basic construction "starting points" from which Batavia bodies are custom built to order.

Subscribe To

AMERICAN MILK REVIEW

●

$5.00 per year

including "next published" edition of Who's Who in the Dairy Industries.

URNER-BARRY COMPANY

Publishers since 1858

92 WARREN ST. NEW YORK 7, N. Y.

SAVE Fuel, Water and Time
Do Better Rinsing

SHUT-OFF VALVE

Delivers the right kind of stream

With Round Nozzle for Distant Rinsing

With Blade Nozzle for Close-up Rinsing

CONTROLLED PRESSURE WATER STATION

For best results use long-lived ½" Special Lightweight Hose equipped with Whip-End and Special Coupling with the Shut-Off Valve.

Write for detailed information about these and the other efficient, money-saving cleaning devices

SPECIALIZED ENGINEERING SERVICE

P. O. Box 816, Church St. Station
U. S. Post Office, NEW YORK, N. Y.

Specially Designed Quality Equipment for Economy and Reliability

Batavia Bodies to Europe

PICTURED HERE are five of seven Batavia refrigerated ice cream bodies mounted on Chevrolet chassis which left Batavia, Ill., last month en route to Europe. Sold to the Army & Air Force Exchange Service, they are furnished for use by U. S. armed services overseas.

All-white without lettering or further paint design, these overseas ex-

ports are among the few units ever to leave the Batavia Body Company without the distinctive hand lettering which is normally one of Batavia's custom features.

As in previous Batavia exports—when 21 refrigerated meat bodies were sent to Germany—these ice cream bodies are equipped with Batavia's exclusive hydraulic refrigeration system, providing "en route" refrigeration through the truck's own power take-off. All seven ice cream bodies hold 1,000 gallons of ice cream.

●

Promotion Novelty

KIT-SIP, newest product of the Noveline Plastic Co., New York, is fast becoming a favorite with parents, children and dealers alike. Molded of sanitary, easy-to-clean bright red styrene by the Jamison Plastic Corp., Freeport, N. Y., the KIT-SIP is a cute kitten with a "hole in the head." A colorful plastic straw or ordinary drinking straw goes through the head into the glass.

Thus KIT-SIP solves the problem of the youngster who has to be coaxed to drink his milk . . . he's happy to sip through the straw just "to make the kitty drink." Designed to hold up to a 9-ounce glass, KIT-SIP is packed in an attractive individual box with matching plastic straw . . . suggested to retail at 59c.

●

Steam Generator

STEAM GENERATOR BOOKLET gives information on company's Powermaster units for steam or hot water use. High or low pressure units from 15 to 500 HP are described. Details are given on special burner design and the units' ability to be changed from oil to gas firing in a matter of minutes. Copies of Bulletin 1218 are available from Orr & Sembower, Inc., Morgentown Road, Reading, Pa.

●

New Issue of "Food"

"THREE-TO-ONE GRADE A Milk Concentrate"—a feature story discussing all phases of this top dairy subject—is contained in the latest edition of "Food," just off the press and published by Mojonnier Bros. Co. as a service to the Dairy Industry. Other articles, such as "Cooling at Carnation," "5-Star Vacuum Filling News," "Bulk System Teamwork at Green Valley Farms," along with latest dairy processing developments, techniques and product applications, make this colorful, fully illustrated 24-page edition of "Food" the most interesting and informative for dairymen to date. Readers who have not received a copy can have one promptly by writing direct to Mojonnier Bros. Co., 4601 W. Ohio St., Chicago 44, Illinois. There is no charge.

●

Stainless Steel Clamp

A NEW STAINLESS steel clamp, known as the Specialty Products Series 21 Quick Coupling Clamp, is announced by the Specialty Products Company, Cleveland.

Featuring a new hinged latch for quick assembly or removal, this clamp,

on which patents are pending, is especially designed for convenience in handling removable equipment. It assures an efficient seal for all types of hose and duct connections. The unique design used in the latch assembly to give extreme strength combines with its all stainless steel construction to make this clamp suitable for high temperature, pressure and corrosion resistance. It is further stated that the unit has an extremely high strength-to-weight ratio.

It is at present planned to make this new Specialty Products Series 21 Quick Coupling Clamp to customer

Sales Service for Manufacturers of
MILK PRODUCTS
Evaporated Milk—Powdered Skim Milk — Powdered Buttermilk — Condensed Skim and Whole Milk — Powdered Whole Milk.
C. W. BURCKHALTER, Inc.
156 Franklin St. New York, N. Y.
WAlker 5-0727

specifications or to engineer them to specific requirements. Inquiries should be addressed to Fenton M. Davison, Specialty Products Company, 1965 East 66th St., Cleveland 3, Ohio.

●

Diversey Study

THE DIVERSEY Research Laboratories have just published results of a significant study of variations in the characteristics of E. Coli induced by quaternary ammonium compounds.

E. Coli, investigation disclosed, has a tendency to build up resistance to quaternaries, thus limiting their germicidal effectiveness.

Further, quaternaries so alter the organism's appearance and characteristics that it cannot readily be identified in standard tests for its presence in milk.

Copies of the complete published report may be obtained free of charge by writing to: Research Department, The Diversey Corporation, 1820 Roscoe St., Chicago 13, Ill.

●

Acidity Standardizer

WYANDOTTE CHEMICALS recently introduced a free flowing, balanced, acidity standardizer known as Nuflo. An instantly dissolving product, Nuflo is fast acting, non-caking and of outstanding purity.

Nuflo is specifically designed for standardizing operations in making butter, cheese, ice cream mix, chocolate or malted milk, separation of sour milk and cream, commercial buttermilk and other manufactured dairy products.

A handy, batch-lot sliding scale, for figuring how much Nuflo is required to standardize a given quantity of cream, is available from any Wyandotte Sales and Service Supervisor.

This scale may be secured from any of the 19 Wyandotte Chemicals district offices, or from the home office at Wyandotte, Mich.

●

Flavors For Milk

EVEN THE cows are envious of NUmilk Flavors—a brand new product developed by NUmilk Flavors Corporation, New York, which provides an economical, convenient way for milk drinkers to flavor and

color milk to suit their individual tastes.

Available in nine flavors—strawberry, cherry, coconut, vanilla cream, banana, peach, root beer, grape and raspberry—these popular milk flavors are packaged in protective heat-sealing foil envelopes printed and laminated by Shellmar Products Corporation, Mt. Vernon, Ohio. Packed 18 (two of each flavor) to the box, the individual packages are easy to open and use . . . keep the flavors dry and delectable.

Milk flavored to taste is making a big hit with youngsters and grown-ups alike. Parents find it a wonderful, new way to get their children to drink plenty of health-building milk and these powdered milk flavors make a delicious flavoring for cake icings, ice cream, and cereals as well. NUmilk Flavors are being marketed by milk companies throughout the nation.

●

Discharge Piping Systems

A NEW publication of the Farris Engineering Corporation, 594 Commercial Avenue, Palisades Park, N. J., proposes an approach to the design of discharge header systems based upon the partial or complete elimination of back-pressure effects on tied-in safety-relief valves.

Claimed to offer typical savings in the order of 75 per cent on the cost of conventional discharge piping, this manual gives operating test data on the company's complete line of Farri-Seal and BalanSeal bellows-type Safety-Relief Valves, as well as data of general interest to the engineer, draftsman, or designer of closed safety-relief discharge systems.

Voicing the theme of "Engineered Safety", the Farris Company analyzes the economics of standard design practice as it effects the cost of pressure relief in closed systems where control or recovery of the lading fluid is essential. In such systems, it is pointed out, the effects of back pressure on the operation of the common relief valve necessitates the use of oversize, overweight discharge piping. If such static or surging back pressure can be compensated for in the valves themselves, smaller discharge piping can be specified. A large part of the manual

An Urner-Barry Service Feature . . .

SPECIAL WEEKLY STATISTICAL REPORT

A Careful Analytical Study of the position of Butter, Eggs and Dressed Poultry . . .

By Mail or Wire . . . Write for Sample Copy

●

URNER-BARRY COMPANY

Publishers Since 1858

92 Warren Street New York 7, N. Y.

WANTS and FOR SALES

Classified Advertising Rates

(Kindly send remittance with order)

Position Wanted

50 word maximum, 50c — 2c for each additional word.

All Other Advertisements

Lightface type: 5c per word ($1.00 minimum).
Boldface type: 10c per word ($2.00 minimum).
(The name and address should be included in counting the words.)

Keyed Address

25c additional in the United States.
50c additional in Foreign Countries.

When replying to any of the following keyed advertisements please address replies to:

BOX NO.....AMERICAN MILK REVIEW
92 WARREN STREET NEW YORK 7, N. Y.

(The deadline for Classified Advertising is the 10th of the month preceding publication.)

No classified advertising will be accepted to run with borders or special spacing. All such advertisements are considered "Display" advertising and will be billed at regular display advertising rates. (Rates and mechanical requirements on request.)

EQUIPMENT FOR SALE

REBUILT—Pasteurizers, Milk Coolers, Bottle Fillers, Ice Machines, Plate Coolers and Heaters, Homogenizers and Bottle Washers. Send us your requirements. Ohio Creamery Supply Company, 701 Woodland Avenue, Cleveland, Ohio. 11-M-51

FOR SALE—One Model BR-630-705 Westco two stage direct connected motor driven boiler feed pumping unit. Capacity 47 GPM of condensate up to 200°F temperature from 7' positive suction head against 155-160 lb. discharge pressure when operating at 1750 PRM. 220-440 Volt, 10 h.p. In good condition. Write to MacDonald Cooperative Dairy Company, Flint, Michigan. 11-M-51

FOR SALE—8 wide Meyers-Dumore bottle washer; 800 gallon Union Steam viscolizer with new C.P. stainless steel head; 200 gallon cheese vat; 5x5 ammonia compressor. Write to Box 186, care of this publication. 11-M-51

DAIRY, butter, ice cream plant equipment of all kinds. Write us what you need or what you have that you do not need. We buy, sell and trade. Specialize in liquidating dairy and food plants. Write the Gordon Equipment Company, 6530 West Jefferson Avenue, Detroit 17, Michigan. 11-M-51

EQUIPMENT FOR SALE

FOR SALE—Lookout 8 H.P. Boiler, flueless upright with automatic oil burner and return system. 200 gallon Cherry pasteurizer, Taylor recording and long stem thermometers, Cherry Icy-flo with 3 H.P. compressor, Milwaukee 6-16 filler, 350 United steel T square wire cases, York ice cube maker, C.P. 6 wide Bantam soaker washer, 2 unit heaters, 2 Master milk pumps, equipment table, 2000 ½ pint square bottles. Write to Arlington Farms, Rock Rapids, Iowa. 11-M-51

FOR SALE—Ready to drive away —used delivery equipment. We have UM and ULM Divcos; Dodge 1 tons with DeKalb Bodies; Wholesale milk trucks and bodies. This equipment is suitable for regular routes or for use as a spare. We are the largest lessors of milk delivery equipment West of the Mississippi. Call or write BAKER TRUCK RENTAL, INC., 302 North Osage, Wichita, Kansas. 11-M-51

FOR SALE—Cherry-Burrell 200 gallon viscolizer, 5 years old, in A-1 condition, 3 phase motor. Write Marten's Dairy, Neenah, Wisconsin. 11-M-51

EQUIPMENT FOR SALE

FOR SALE — 1 Model E, 8 wide Cherry-Burrell soaker bottle washer in first class shape. 1 GV10 Cherry-Burrell bottle filler, left hand, in good condition. 100 dozen 10 ounce new 48 mm. plain bottles. Make us an offer. Sanitary Farm Dairies, Inc., in St. Paul, Minnesota, or in Clinton, Iowa. 11-M-51

FOR SALE — 1 5000 lb. C-B Plate Cooler for City Milk bottling. 3 - 300 gallon C-B Spray Type Pasteurizers, One Right Hand and Two Left Hand. Includes Air Space Heaters and Taylor Water Temperature Regulators. All equipment is in A-1 condition. Available about January 1st. We invite you to personally inspect the equipment. Write Bridgeman Creameries, Inc., Duluth, Minnesota. 11-M-51

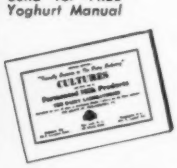
FOR SALE—1000 gallon Cherry-Burrell Model SVS all Stainless Steel Storage Vat with cooling coil; 800 and 1000 gallon Horizontal Coil Vats with stainless steel linings and T.C. coils; 5000 lb. and 11000 lb. Short Time Pasteurizing Systems; 100 to 400 gallon Stainless Steel Pasteurizers; Creamery Package Plate Cooler, 58 s.s. plates; Mojonnier Stainless Steel Cabinet Cooler, 8 wings 72 tubes high; Cherry-Burrell Junior Cabinet Cooler, 9 wings 36 tubes high; 12,000 lb. and 20,000 lb. Clarifiers; 75 to 1500 gallon Homogenizers or Viscolizers; 1000 to 4000 gallon Pfaudler Glass Lined Tanks (for By-Products); Rotary Milk Can Washer, 6 c.p.m.; Bottle Fillers, Bottle Washers, Pumps, etc. Write or wire your requirements. Lester Kehoe Machinery Corporation, 1 East 42nd Street, New York 17, N. Y. Telephone—Murray Hill 2-4616. 11-M-51

FOR SALE — Seventeen hundred, twelve round quart bottle Milk Cases with wooden posts. Square bottles can be used for same. Make offer F.O.B. New York City. Also eighty, twenty half pint milk cases which will hold round or square bottles. All cases imprinted Karsten's on ends, price sixty-five cents, F.O.B. 24 gross new half squat round bottles with Karsten's in red letters on them, two dollars per gross, F.O.B. New York City. Write to A. & H. Karsten, 2337 Waterbury Avenue, Bronx 61, New York. 11-M-51

KEEP CUSTOMERS SATISFIED

Don't take chances with contamination! Keep every propagation uniformly perfect in flavor, aroma and smoothness by using FLAV-O-LAC FLAKES.

Send for FREE Yoghurt Manual



YOGHURT CULTURE

A DIVISION OF DALARE ASSOCIATES

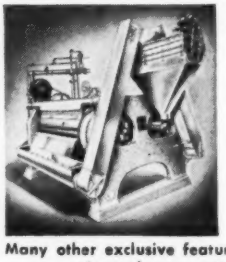
Single Bottle $2.00 Needs only one propagation

The Dairy Laboratories

Dept. A PHILADELPHIA 3, PA.

Branches: NEW YORK - BALTIMORE - WASHINGTON

Better DRY MILK



AT LOWER COST

DRY MILK MACHINES
Built in Five Sizes

The Patented, glass-smooth "20-year cylinders" give years and years of maximum production of a superior dry milk at the lowest possible cost.

Many other exclusive features insure long life with low steam and power costs. Complete details upon request

OVERTON MACHINE COMPANY

Dowagiac Michigan

EQUIPMENT FOR SALE

SPECIAL OFFERINGS — Morpac Type "MX" Butter Wrapping machines; Complete Receiving Room Equipment consisting of Scale, 1000 lb. Stainless Steel Weigh Can, Stainless Steel Receiving Vat, Rice & Adams 12 C.P.M. Washer, also lot of incoming and outgoing Can Conveyor. Lester Kehoe Machinery Corporation, 1 East 42nd Street, New York 17, New York. Telephone—Murray Hill 2-4616.

FOR SALE—Another new 1951 Ford Vanette Dortudor Milk Delivery Unit. New Factory Warranty. Regular price $2386. Our price $1875. No trades unless at wholesale price. Write to Tom Purvis, Inc., for Dealer, Mattoon, Illinois. 11-M-51

FOR SALE—125 gallon Homovitor. In good condition. Our business necessitates a larger one. Priced right for quick sale. Write to Dairy Service Company, 135 South Main Street, Oberlin, Ohio. 11-M-51

FOR SALE—1 Lathrop-Paulson Straightway Can Washer, 16 cans per minute, with water pump, speed reducer and solution pump and motors. Write to HERSHEY CHOCOLATE CORPORA-

BUSINESS OPPORTUNITIES

PARTNER with aggressive sales ability in small milk plant grossing $85,000 annually. Write to Box 187, care of this publication. 11-M-51

BUSINESS OPPORTUNITIES

FOR SALE—Dairy and poultry farm in central western Indiana; 194 acres, tillable, spring water in pasture, two good wells. Two all modern houses, Rural route, telephone, school bus passes the door. Two barns, large poultry house, milk house, equipped with pasteurizing plant, doing excellent retail business. Reason for selling, no help. Ideal setup for father and son. Price $28,000. Write to Box 172, care of this publication. 11-M-51

WANTED—Large or small supply of skim for cheese to be manufactured on premises. Unequalled opportunity. Reply to Box 136, care of this publication. 11-M-51

WANTED TO BUY

WANTED—Single compartment stainless steel weigh tank. Write to Box 185, care of this publication. 11-M-51

WANTED—To buy or rent, one automatic filing and closing machine for American Can containers, 20 or more bottles per minute. Write to Box 184, care of this publication. 11-M-51

WANTED — One atmospheric drum drier preferably 32"x96". Please write giving full particulars to THE DELTA REFINERY LIMITED, R.R. 3, VANCOUVER, BRITISH COLUMBIA, CANADA. 11-M-51

WANTED TO BUY

WANTED—Used boilers—high or low pressure. Any size or type. Also used smoke stacks, pumps and motors. Give full information and prices. Write to Otto Biefeld Company, Watertown, Wisconsin. 11-M-51

WANTED — Standard Cap and Seal welded wire rolls, Any Quantity. Also ½ pint and pint Sour Cream and Yogurt misprints or outdated old style plug lid types. Write to Box 108, New York 13, New York. 11-M-51

POSITION WANTED

POSITION WANTED — Salesman with outstanding sales achievement record in the dairy industry seeks new sales position by January 1st. Familiar with territory between Denver and Pittsburgh and will work on commission arrangement. Age 40, education consummated at the University of Illinois. Will relocate anywhere necessary. Write to Box 183, care of this publication. 11-M-51

POSITION WANTED — Aggressive sales manager desires a change in employment away from the Pacific Coast. Outstanding record. At present managing dairy doing $1,000,000.00 this year. Write to Box 181, care of this publication. 11-M-51

SWISS BOY 23, four years of experience in dairy work, graduate of Switzerland's Dairy Industrial School, two years at the School of Commerce, is looking for a position in American dairy industry. Write to Box 188, care of this publication. 11-M-51

"THE WORLD REBUILT—"

a new book by Peter Howard. Page after page it tells the story of how ordinary men and women are driving selfishness out of their lives and businesses around the world.

•

$1.00 per copy

•

Order Your Copy Through

URNER-BARRY CO.

BOOK DEPARTMENT

92 Warren Street New York 7, N. Y.

(Send check or money order with your order)

P D Q

Performance Durability Quality

Kleenette Stainless Steel sponges provide maximum cleaning efficiency, economically achieved

with LESS effort

at LESS cost !

Compare - Make the smart decision - Buy Kleenettes

AVAILABLE THROUGH JOBBERS · COAST TO COAST

KLEENETTE MANUFACTURING CO.
1269 W. North Ave. Chicago 22, Ill.

Request FREE SAMPLE on your letterhead.

POSITION WANTED

WANTED—Position as creamery foreman. Experienced in all creamery work including pasteurizing milk and cream and manufacturing of related dairy products. Willing worker. No bad habits. Interviews can be arranged. Address replies to Box 161, Winchester, Indiana. 11-M-51

HELP WANTED

WANTED — Experienced field inspector with full knowledge of quality control and fluid milk plant equipment. Must be acquainted with requirements of New Jersey and New York State dairy scoring. Write to Box 189, care of this publication. 11-M-51

SALESMEN—We desire men of high calibre presently selling dairies to handle our plastic promotional items of proven volume. Only men who are firmly established in the field and have had experience selling the top dairies need apply. Give complete resume in your first letter. Write to Box 180, care of this publication. 11-M-51

WANTED—Salesmanager and supervisor to take charge of sales and routes for privately owned dairy located in lower Michigan. Operating 24 routes with excellent prospects for expansion. Top salary with additional compensation for increased sales. Good future for qualified man. Write fully giving full details. All correspondence kept in strict confidence. Write to Box 196, care of this publication. 11-M-51

Large Eastern Jobber needs service man experienced on Dairy Equipment. Excellent opportunity. Write to Box 182, care of this publication. 11-M-51

MISCELLANEOUS

PURE TREE RIPENED LIME JUICE, ORANGE JUICE OR TANGERINE JUICE FOR BETTER SHERBETS. Sample order, 12 Number 10 cans, any combination, only $15.00. Write to Choate & Atkins, Inc., Eustis, Florida. 11-M-51

Chocolate Milk made from Bradway genuine chocolate powder or syrup is better. Write for sample to Bradway Chocolate, New Castle, Indiana. 11-M-51

Dairy Grape-ade is profitable. Your total cost 9c per quart. Write for sample to Bradway Chocolate, New Castle, Indiana. 11-M-51

Dairy Orange-ade base made from fresh oranges. Write for sample to Bradway Chocolate, New Castle, Indiana. 11-M-51

FOR SALE—Truck lettering and trade mark decals made for your trucks and store advertising. Easy to apply, uniform, distinctive, economical for small or large needs. Write for catalog. Mathews Company, 827 South Harvey, Oak Park, Illinois. 11-M-51

THERMOMETER REPAIR SERVICE

THERMOMETERS—We repair Mercurial Indicating Thermometers, dial thermometers and recording thermometers of all makes. Instruments are reconditioned like new. Satisfaction guaranteed. For economical savings, ship your thermometer s to Nurnberg Thermometer Company, 124 Livingston Street, Brooklyn, New York. 11-M-51

JOINS PURE-PAK STAFF

Clyde H. Lamar, formerly managing editor of Southern Dairy Products Journal in Atlanta, Ga., has joined the Pure-Pak Division of Ex-Cell-O Corporation, Detroit, Mich., to assist

C. H. LAMAR

in further development of the Pure-Pak national milk selling program.

For the past seven years, Mr. Lamar has had an intimate association with all branches of the dairy industry in the southern states. He has an understanding of general industry problem and is able to contribute substantially to the Pure-Pak Division's various information and advertising service for its dairy customers in 48 states.

Ralph C. Charbeneau
Director of Advertising,
Pure-Pak Division

●

DIVERSY PROMOTES TWO

W. E. Noyes, vice-president in charge of sales of The Diversey Corporation, Chicago, has announced promotion of former Pacific Division Manager F. O. Spence to regional sales manager. R. C. Perry, formerly assistant Pacific Division manager in charges of sales for the entire state of California, has been named manager to replace Spence.

The Diversey Corporation is a major supplier of cleaning and sanitation chemicals for the food industries.

As regional sales manager, a newly-created post in the Diversey sales organization, veteran D-Man Spence will concentrate on further expansion of sales coverage from a geographical standpoint. He will continue to exercise overall supervision of Pacific Division sales, inasmuch as the division is part of the sales region he has been named to head.

●

CARNATION SALES MANAGER

Mark A. Matthews, assistant general manager of Carnation Company's Los Angeles milk plant, has been named general sales manager of the firm's entire fresh milk and ice cream division, it has been announced by Alfred M. Ghormley, vice-president.

He succeeds William D. Dobson who was named executive vice-president of General Milk Company, Carnation's foreign affiliate.

Matthews joined Carnation in 1933 at the firm's Seattle milk plant, later served in the purchasing, sales and production department at the Los Angeles plant, where he became assistant general manager in 1944.

Matthews is a native of Seattle, a graduate of the University of Washington and Harvard Business School.

●

VACUUMIZER

(Continued from Page 36)

edy this situation. Mr. Breuninger says that air trouble at the filler has been practically eliminated.

Another and truly surprising dividend that the vacuumizer seems to be paying is in lower bacteria counts. This is an unsubstantiated development that is not yet supported by exhaustive tests. Theoretically, however, it makes sense. Bacteria must have oxygen in order to live. If the oxygen is removed, which is what happens when entrapped air is taken out of the milk, then the oxygen which the bacteria need is also removed or at least substantially reduced. It is logical to believe that this has a definite effect on the rate of growth of bacteria. There have been some comparisons made of counts in three weeks old samples of milk that was not vacuumized and milk that was vacuumized. The results were startling. However, there is not enough evidence available at the present time to draw a reliable conclusion. Nevertheless, there is a definite possibility that there is a connection between the removal of entrapped air and lower bacteria counts.

The vacuum was developed and is marketed as a device for removing entrapped air. The removal of odors and lower bacteria counts are considered as extra dividends by the manufacturer. The machine operates most effectively when milk is at a temperature of about 135 degrees F. It is recommended that it be hooked into the processing line between the pasteurizer and the homogenizer as Breuninger's Dairy has done.

The device is mounted on legs made of steel tubing and stands about five feet from floor to top of cylinder. It is taken down and cleaned after the processing operation just as any other piece of equipment is cleaned. The vacuumizer used at Breuninger's handles 20,000 pounds of milk per hour. The device is manufactured by the Chester-Jensen Company of Chester, Pennsylvania. It will bear watching.

●

INDUSTRY PROBLEMS

(Continued from Page 30)

a very high degree of agitation so that there is no possibility for the lime to settle out. Where lime water is used, a good quality of mason's finishing lime—about 1 part of lime to 10 parts of water—is used and is colored a very light yellow with some dye or paint. We have used methyl orange, which can be procured in any drug-store and is effective in very very small quantities. Synthetic milks of the same type can be made using barium salts and other materials which will give an opaque solution and are relatively easy to keep in suspension. For slow-moving apparatus, however, lime water is not satisfactory.

There are a few other materials which make satisfactory "synthetic" milks. One of these is water-soluble paint. This material is quite inexpensive and will dilute out with water to make an excellent mixture. It is preferable to use a flat, white paint with a small amount of yellow color added. The cream-colored paints are not satisfactory because they are frequently too yellow. It is important that the water paints be mixed with a small amount of water and then run through a screen in order to be sure that all lumps are removed and that a non-separating, easy-flowing material will result.

Probably the best of the synthetic milks, however, is made by using cutting oil. The ordinary cutting oil which is made by most of the oil companies for industrial use on heavy lathes, etc., is white in appearance and will mix with water. It comes in a paste form and a little experimentation will show you how much of the material you must use in order to get a material of the proper viscosity. This material has the added advantage that it is lubricating in nature and cuts down the wear on pumps. Also pipes, valves, and other parts of the system will not rust in its presence. It is absolutely stable, non-separating, and even after protracted periods when the apparatus is not in operation, it needs no stirring or special treatment, as does lime water or sometimes the water-soluble paint.

There is no need to fear that there is a tremendous waste of human food involved in the construction of display apparatus which shows milk in motion, because it is much more feasible to use milk substitutes than milk itself. Substitutes often look much more like milk than the milk does under these conditions.

●

TANK TRUCKS

(Continued from Page 72)

spray under one hundred pounds per square inch is used.

Both Swaners, father and son, are extremely enthusiastic over the bulk handling operation. John Swaner describes it as "a receiving room on wheels." The Swaners plan to convert all of their routes from cans to bulk handling operations as soon as possible. When this is done they believe it will be possible to do away with their receiving room entirely and use the space for something else.

Farmers on the tank truck route do not like the tank truck any less than the can system and most of them like it a great deal more. Some of them were a little reticent to build up a large head of steam over the packaged milk house and the tank truck. Indeed, for a New England Yankee, raised in an area where being noncommitmtal has been elevated to fine art, it was a revelation to find a group of farmers who were the equals, if not the superiors, of any non-committers in the business. Many of these farmers were new to the dairy business and possibly were not quite certain just how they felt. Indeed, the mere fact that a tank truck route could be set up in a land where a man can't walk for stepping on a beef creature or a hog or a turkey or something that will convert corn, is an achievement. However, the majority of the farmers were well pleased with the system. The fact that they were willing to invest their money in a packaged milk house and a stainless steel holding tank indicates more than a passing interest in the proposition. The ten cents a hundred reduction in hauling charges plus the labor saving milking techniques, plus the accuracy of weighing and sampling are the chief features that appeal.

The big question mark right now is the matter of spring mud. Most of Iowa's secondary roads are dirt roads. Gravel is hard to get out in that fabulously rich corn country. Snow will not be a great hazard. Marvin Saas has no doubts about his ability to get through in the winter. It is the spring time when the bottom drops out and the roads turn into mud that has him somewhat concerned. He expects that it will work out all right but it is still a question.

INDEX OF ADVERTISERS

PAGE

A

Alloy Products Corp. 38
American Dairy Association 45

B

Barker Equipment Company 65
Buflovak Division of Blaw-Knox Co. 39
Burckhalter, C. W. 80

C

Cherry-Burrell Corp. ..... Inside Front Cover, 54
Chester-Jensen Company 47
Chocolate Products Co. 63
Corning Glass Works 9
Creamery Package Mfg. Co. 80
Crown Cork & Seal Co. 11
Cumberland Case Company 21

D

Dairy Laboratories, The 82
De Laval Separator Co., The 1
Dickinson & Co., F. B. 67

F

Flavor-Line, Inc. 77
Forbes Company, Benjamin P. 70, 71
Foxboro Company, The 43

G

Gair Company, Inc., Robert 85
General Mills, Inc. 55
Girton Mfg. Co. 15, 74
Grant Paper Box Co. 81
Gundlach Co., G. P. 72

H

Haynes Manufacturing Co., The 29, 68
Howe Ice Machine Co. 61

I

International Paper Company (Single Service Division) 19

J

Johnson Company, Gordon 77

PAGE

K

Kendall-Lamar Corporation 66
Kleenette Manufacturing Co. 83
Klenzade Products, Inc. 60
Kurly-Kate Corporation 75

L

Lathrop Paulson Co., The 33
Lazarus Laboratories, Inc. 78
Liberty Glass Co., The 23
Lumenite Electronic Co. 78

M

Manton Gaulin Manufacturing Company, Inc. 49
Marine Midland Trust Co. 53
McGlaughlin Oil Company 70

O

Overton Machine Co. 82
Owens-Illinois Glass Co. 12-13

P

Pfaudler Company, The 25
Phillips & Co., H. A. 71
Pure-Pak Division, Ex-cell-o Corp. 2-3
Purity Manufacturing Co., Inc. 59

R

Rice & Adams Equipment Division (Pressed Steel Car Co.) ..... Inside Back Cover
Rogers Co., C. E. 58

S

Sharples Corporation, The 35
Solvay Sales Div. (Allied Chemical & Dye Corp.) 4
Specialized Engineering Service 79
Stoelting Bros. Co. 56

T

Thatcher Glass Manufacturing Co., Inc. 17

U

United Film Service, Inc. 31
United Steel & Wire Company ..... Back Cover

V

Vilter Manufacturing Company, The 57

W

Waukesha Foundry Co. 69
Wood Co., John (Superior Metalware Division) 58